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The Wisconsin Archeologist

Hol. 11

October 1931
NEW SERIES

No. 1

REPRINTS OF EARLY DESCRIPTIONS OF EFFIGY MOUNDS



PUBLISHED QUARTERLY BY THE
WISCONSIN ARCHEOLOGICAL SOCIETY
MILWAUKEE

WISCONSIN ARCHEOLOGICAL SOCIETY

MILWAUKEE

The Society is a state department, receiving a part of its support from the state. Its funds are under state control. Its work is well and widely known. It has received the approval of leading American archeologists, who agree that it deserves the full support of all Wisconsin citizens interested in the state's archeological history.

The Society's activities comprise the location, recording, investigating and preservation of Wisconsin Indian remains, folklore and history, all of which are rapidly disappearing and must be recorded and saved immediately if ever.

Through its efforts many fine groups of Indian earthworks and other aboriginal monuments and remains have been permanently preserved to the public. Most have been marked with descriptive metal tablets. Others are being protected. Surveys and explorations have been conducted in many sections of the state.

It is also engaged in encouraging the establishment of public museums and collections and in discouraging the manufacture and sale of fraudulent antiquities.

Regular monthly meetings of the Society are held during the months September to May, inclusive, in the Trustees Room of the Milwaukee Public Museum. Meetings are open to the public. No regular meetings are held during the months June to August, inclusive. Special field meetings are occasionally held during the vacation months.

The results of its research and other activities are made known through its regular quarterly publication, The Wisconsin Archeologist. Thirty volumes have appeared. The Society has a large membership distributed through every part of the state.

It is co-operating to the fullest extent with all of the various scientific and educational organizations and institutions of Wisconsin.

The Wisconsin Archeologist

VOLUME 11
NEW SERIES
1931



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W. C. McKern (Editor), Ira Edwards, H. W. Kuhm,
Charles E. Brown, Charles G. Schoewe

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Milwaukee, Wisconsin

Incorporated March 23, 1903, for the purpose of advancing the study
and preservation of Wisconsin antiquities

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INTRODUCTORY NOTE

The two following papers are reprints of very early references to the Indian mounds of Wisconsin. They are not presented as new material, for the mounds mentioned have long been listed in the "Catalog of Wisconsin Antiquities", but only as interesting accounts, now not available to the great majority of the society's members. It will be noted that these greatly antedate the monumental work of Dr. Lapham and contain very interesting speculations in regard to the origin of these features. If any of the members have knowledge of still older descriptions of Wisconsin mounds, it would be interesting to determine the earliest mention of these artifacts.

IRA EDWARDS.

wards those singular memorials which daily presented themselves on the route through this interesting region. Respecting the so-called city of Aztalan,² I was prevented, unfortunately, when within a day's journey, from reaching its site; and regret my inability to speak from personal knowledge on this subject. Information of a more detailed and scientific character than we now possess is much needed.

As relates to a great number of other positions, it was discovered that the configurations of the earthworks, or mounds as they are usually termed, which at first sight appeared decidedly to resemble the sites, or ground plan, and foundation lines of former buildings, were really designed as rude representations and outlines of certain animals,³ in Wisconsin.

and even of the human figure; in addition to those tumuli which had been constructed in the usual circular, quadrangular, and oblong shapes.

The circular tumuli of the Wisconsin prairies, are commonly about fifty feet in diameter, and are not elevated, in general, more than ten or fifteen feet above the surrounding level; but often not half so much.

Those in the forms of parallelograms are seldom less than a hundred feet long, and are occasionally seen much longer, as in the example figured, (pl. II, fig. 3,)⁴ which is six hundred feet in length. Perhaps in this instance it was thrown up as a defensive earthwork, as its situation seems to indicate.

Above the junction of the Des Moines River with the Mississippi, in Missouri, in the region locally known as "Black Hawk's Country," we examined a long range of the circular tumuli. These were all of the common size, and some of them contained recent graves of deceased Indians, as was afterwards observed in many other localities. Thus, in the present day, the burial place of the Sauks and the Fox, the Winnebago, and other tribes, is very commonly chosen upon the site of the more ancient monuments; the memorials of a people that existed in unknown times.

² Lapham published the first map and description of this site some twenty years later. Another sixty-five years elapsed before the site was subjected to scientific excavations.

³ This is possibly the first printed mention of animal-shaped mounds

⁴ Fig. 1 of this issue.

It is scarcely necessary here to include within our notice those mounds of much larger dimensions, existing on the borders of the Ohio and Mississippi, to the south and east. On the former river one mound is seventy feet high, and thirty or forty rods in circumference. Even within the limits of the rapidly rising city of St. Louis, are some of great magnitude. On the American bottom, at the village of Cahokia, (Illinois,) it is stated by a contributor to a Western periodical that more than two hundred mounds are visible from one spot; the largest being 2400 feet in circumference, and 90 feet in height; in figure approaching to a parallelogram. In the Cherokee country an earthwork has been described, as 75 feet high and 1114 feet round.

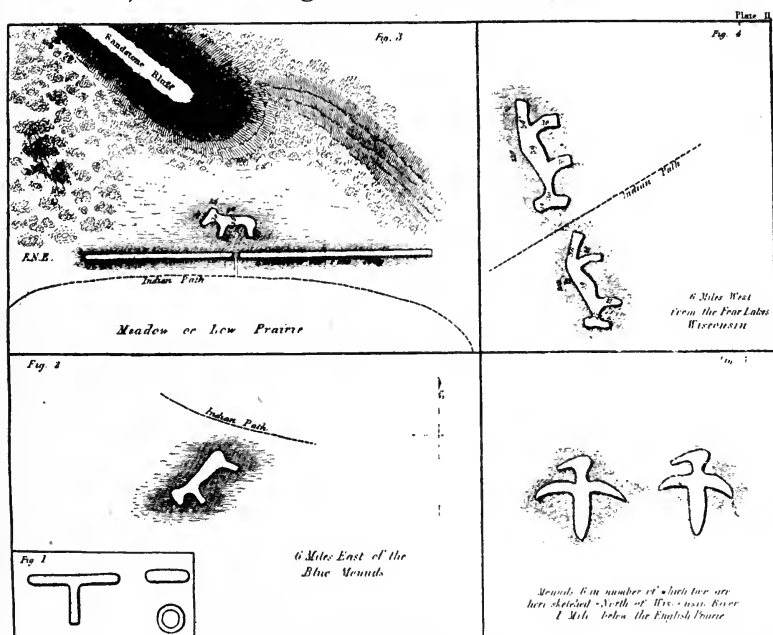


FIGURE 1

The earthworks which have been constructed in the shapes of animals, abound in the Iowa district⁵ of Wisconsin. They occur, with the other varieties, in great numbers, around the high lands which skirt the "Four Lakes,"⁶ forming a species of alto relievio, of gigantic proportions. This district appears to have been originally much resorted to by

⁵ Iowa County?

⁶ Madison. .

the early tribes, whose relics we here behold, mixed with those of the modern Winnebagos. At one spot alone, probably, at least one hundred tumuli may be counted. The Indian path, along which we passed, has, for near half a mile in length, a series of these, mixed with circular mounds, in tiers several deep, on both sides; forming a cemetery in magnitude of itself sufficient, one would imagine, for the chiefs and warriors, and their descendants, of a whole tribe, if such was the original design of these earthworks. On the summits of some might be seen the recent graves, protected by pallisados, of the last Indian possessors of the soil.

The site of the singular group of mounds exhibited in our figure, (pl. I. fig. 1.)⁷ is about eighteen miles west of the Four Lakes, and seven miles east of the two remarkable natural hills called the Blue Mounds.⁸ The area comprehended in the drawing is about two thousand three hundred feet in length. The figures are traced from survey, and their dimensions and the intermediate spaces, were ascertained by admeasurements. In this group there are seen the effigies of at least six quadrupeds; six mounds in parallelograms; one circular tumulus; one human figure, and one circle or ring which may have been formed by the Indians in their dances, whether peaceful or warlike, or may have been occupied for some such purpose, in by-gone times, as the torturing and destroying their prisoners. The great Indian trail, or war-path, which leads from Lake Michigan, near Milwaukie, to the Mississippi above Prairie du Chien, passes along the edge of this chain of earthworks, and is now for many miles adopted as the route of the military road to the latter fort. We pursued this route for a great distance along the dividing ridge between the northern and southern waters; and we continually saw memorials of the character above described, along its borders.

What animals are represented by these rude monuments of earth, now covered with the rank prairie grass, is not made altogether apparent by their designers. If of the horse, the design is somewhat doubtful. We were rather inclined, however imperfect the representation, to attribute the intention of the constructors to be that of exhibiting the

⁷ Frontispiece of this issue.

⁸ Western Dane County.

figure of the Buffalo; an animal which had here the finest pasturage, and an almost boundless range, within one of the most ample hunting grounds, and were exceedingly numerous at the time of the first exploration of the country by the French. It is nevertheless to be admitted, that the hump, a remarkable characteristic of the Buffalo, which it would seem unlikely to have been omitted in the representations of that animal, is never seen in these figures, which are distributed over the surface of so many hundred square miles of this country.

The respective dimensions of these animal effigies in our ground plan, are 90, 100, 102, 103, 120 and 126 feet in length; all of them apparently represent the same description of animal. Figures having precisely the same proportions in their outlines, may be seen at very short intervals throughout the Territory of Wisconsin, being generally from 90 to 120 feet, and extending to 150 feet long. This form, although the most prevalent, is by no means the only one, as we shall proceed to show.

In the midst of this group, represented by our sketch, and forming a very important portion of it, we have now to notice the representation of a human figure, lying in an east and west direction; the head towards the west, and the arms and legs extended. Its length is one hundred and twenty five feet, and it is one hundred and forty feet from the extremity of one arm to that of the other. The body or trunk is thirty feet in breadth, the head twenty-five feet, and its elevation above the general surface of the prairie, is about six feet. Its configuration is so distinct, that there can be no possibility of a mistake in assigning it to the human figure.

There is nothing remarkable about the oblong mounds. The circular tumulus in the centre is the highest, and overlooks the whole group. Whether all or any of these earth-works contain bones, we had no opportunity of determining. They probably all do.

The site of this interesting series is an elevated open prairie, on the dividing ridge between the waters of the Wisconsin and Rock rivers. These monuments are covered with the same green carpet of prairie grass, intermixed with bright and brilliant flowers, as the prairie itself. There

is an intervening space near the centre of the group, now overgrown with bushes, which probably conceal some unnoticed mounds. The figures marked on these and the other animal outlines in our drawings, indicate their dimensions in feet.

We twice visited these singular specimens of Indian antiquity,⁹ and consequently can speak with greater confidence as to the general accuracy of the sketch accompanying this article.

Half a mile westward of this remarkable group, and on the same elevated prairie, occurs a solitary mound, about ninety feet in length, representing an animal in all respects like those we have described, but lying with the head towards the southwest. (Pl. II. fig. 2.)¹⁰

Along the space of twenty miles from this position, extending to the Four Lakes eastward, similar monuments, intermixed with plain tumuli, are seen at almost every mile, in the lowest situations as well as crowning the highest swells of the prairies; and they are still more numerous all around those beautiful but almost unknown lakes. It would be a ceaseless repetition of similar forms were we to figure many of these, but the outlines of a few of the most characteristic are introduced in the plate. Had time and circumstances permitted a more leisurely investigation and survey of some of the groups of this region, there is little doubt but many drawings of a highly interesting character could have been constructed in addition to those which illustrate this communication.

Fig. 3. Pl. II.¹¹ An effigy ninety feet long, in form resembling the animal outlines previously described, is placed

⁹ The author seems to have been endowed with that practical and efficient type of mind which permitted him to see no occasion, in the absence of specific evidence, to suppose that the mounds were other than the works of early Indians. In years to follow, these simple earthworks were to be shrouded in colorful veils of mystery and ascribed to everyone from the Aztecs to the lost tribes of Israel. There are still those in our midst who prefer radiant fancy to less colorful but equally interesting fact.

¹⁰ Fig. 1 of this issue.

¹¹ Fig. 1 of this issue.

nearly at the foot and at the point of a remarkable, picturesque, perpendicular bluff, of coarse, friable sandstone, fronting a rich meadow, the favorite resort, no doubt, of numerous buffalos in olden times. In front of this bluff, and enclosing the mound or effigy, is a long earthwork in an exact straight line, about two hundred yards in length, having an opening in the centre opposite to the animal. The position of this earthwork indicates its having been designed for the purposes of defence or fortification against an enemy; perhaps as an outwork to the strong hold in the rear, formed by the bluff itself. The great Indian road to which we have already referred, skirts along the outer or southern side of this embankment.

Fig. 4, Pl. II.¹² This sketch is drawn from the admeasurement of a couple of animal-shaped mounds, between which passes the same Indian path, at the distance of six miles west of the Four Lakes. These figures are selected to shew that one, if not both of them, represented a different species of animal to those we have traced in the preceding outlines. In one instance only they were depicted with the appendage of a tail; the others were tailless; and whether in the present case this deviation from the usual configuration resulted from the caprice of the Indian artists, or really depicted some beast more favored by nature than his contemporaries, it is not easy at this period to decide. They are respectively one hundred and twenty and one hundred and two feet long, and perhaps may have been intended to represent foxes.

Fig. 5.¹³ Beyond the Wisconsin Territory, on the north side of the river of that name, in the region still held by the Winnebagos, are innumerable mounds, both of the circular and most of the other forms we have figured. At one position, however, near the river, and not far from English prairie, a group of six of these appear to represent birds, probably the eagle, or perhaps the crane, which was the ancient badge of the chiefs of a branch of the once powerful tribe of Chippewas. This sketch was communicated to the writer by the person who took the original admeasurements. The scale of these is about the same as the preceding.

¹² Fig. 1 of this issue.

¹³ Fig. 1 of this issue.

Pl. I, Fig. 2¹⁴ is a tracing from a sketch drawn to a larger scale, of a bird-shaped mound, in the same region; which sketch was furnished me by an intelligent individual, but of course I am unable to vouch for its accuracy. Possibly the figures which elsewhere I had noticed as possessing the general form of the letter T, might on further inspection have been found to approach to the bird form also.

Forms supposed to represent turtles have also been seen in more than one situation, constructed on an equally large scale. Of this class I cannot speak with sufficient certainty from personal observation. We know that there existed the "Turtle Tribe" of Indians, which had that animal for its badge. The "Walking Turtle" family, according to McKenney, was one of the highest distinction in the Winnebago tribe.

To the above notices may be added some memoranda of certain other points where I observed, or have knowledge of the existence of tumuli or mounds in the shape of animals in this western region.

At the great savanna or prairie on the south bank of the Wisconsin river, called English prairie, are earthworks having the circular, the oblong, and the usual animal forms, and also some which bear resemblance to the Roman letter T, as shown in Pl. II, Fig. 1.

Animal effigies occur fifteen miles to the southwest of the last mentioned locality, along the course of an ancient trail, and also of the present military road to Prairie du Chien from Fort Winnebago. Numerous others may be recognized between these and the Mississippi.

In the vicinity of the remarkable hills called the Blue Mounds,¹⁵ they occur abundantly. These hills were, until very lately, a great resort of the Indian inhabitants; as their existing paths, converging hither in singularly straight lines from every point of the compass, amply testify.

In the centre of the territory, at sites which it would be tedious to enumerate, we repeatedly passed by similar mounds, almost invariably contiguous to Indian paths,

¹⁴ Frontispiece of this issue.

¹⁵ Dane County.

whose deeply-worn, but narrow tracks, attest their extreme antiquity and long use.

Between the interesting limestone hill, styled Sinsinnawa Mound, and the town of Galena, these animal representations are seldom out of sight, and are accompanied by earth-works or simpler forms. They prevail equally in the low meadow sites, as upon the higher prairie ridges.

Elevated circular tumuli rise from the flats on the margin of the Mississippi, at the old French village or trading station of Prairie du Chien.

All along the borders of the beautiful Wisconsin river, extending from its mouth to the Winnebago Portage, similar monuments are traceable on the high and dry lands. Occasionally they occur in groups and chains, and not solitarily, and are of various fashions. On the shores of Lac de Boeuf and Lac Apucaway, wherever the land is dry and sufficiently elevated, one may observe, even from the water, a vast number of tumuli. Upon the summits of some of these may from time to time be recognized the modern grave of some Winnebago or Menominie chief, strongly protected by pickets. The margins of the Fox river are remarkable for the numerous Indian remains of this description. Colonel Petitval, of the U. S. Topographical department, who was engaged during the last summer in a survey of this river, had the kindness, at my request, to give some attention to these mounds. He describes an immense assemblage of them, at a point on the river, called the Red Bank, extending far into the interior, both north and south, for an undetermined distance. Twelve of the mounds at this place were opened under his direction, among which was an animal mound one hundred and fifty feet long. All of them contained human bones in a very decomposed state.

One of the most extensive and interesting collections of these monumental structures, exists near the eastern shore of Winnebago lake, within the reservation made to the Stockbridge and Brotherton, commonly called the New York Indians. I am indebted to Dr. Lyman Foote, of Fort Winnebago, for information on this and some other localities of Indian monuments.

At a place named Crawfordsville, on the Fox river, a group of ancient mounds has recently been announced in

the western papers. These structures are described as being from three to seventeen rods (two hundred and eighty feet) in length; generally about four feet high, and they are stated to resemble "lizards, turtles, buffalos, and even human here all point in the same general direction, but are not precisely parallel. Among them there is one very large mound, which overlooks all the rest.

A writer in the United States Gazette, during a late visit to Wisconsin, observed numerous mounds and large embankments, spread over a space of thirty miles around the site of "the ancient city." Some of them were designed, he states, to resemble "lizards, turtles, buffalos, and even human forms." The present wandering tribes of Indians are "entirely unable to give any account of these remains, or to furnish the slightest tradition respecting the ancient possessors of the soil."¹⁶

Having disposed of as much of the details in my possession, as appear necessary in relation to the localities of animal-shaped earthworks, I have little to add concerning the mounds and Indian antiquities of other parts of this continent. Ample details respecting a great many of them may be found in well known works on these subjects, such as that of Dr. McCulloch, and the *Archaeologia Americana*.

From these and other authorities it does appear, that the forms of these mounds elsewhere are materially different to those I have been describing in Wisconsin and to the north of it.

The animal form does not prevail in the Indian monuments within the valley of the Ohio. No allusion is made by Colonel Long, in the narrative to his second expedition, to any but the ordinary circular tumuli, in the relative positions of which the editor observes, "we could discover no order or plan." On the banks of the Miami river, a group of one elliptical and four circular mounds is described, and figured in plate 2, of the narrative.

On the Fox river, of the Illinois, Colonel Long saw many mounds, counting twenty seven at one spot, arranged with a certain degree of regularity, "varying from one to four

¹⁶ If the Indians were so ignorant of the origin of the mounds one hundred years ago, how can one expect to obtain accurate information on the subject from their descendants of three generations later?

and a half feet in height, and from fifteen to twenty five feet in length. Their breadth is not proportionate to their length, as it seldom exceeds from six to eight feet;" other mounds are described of an oval form.

The square and pyramidal mounds occur most frequently in the south; and Dr. McCulloch, who is good authority on the subject of Indian antiquities, observes, "that there seems to be a material difference in the construction and position of the mounds in Georgia and Florida, from those of Ohio, Kentucky, & c.

Tumuli, in the form of truncated pyramids also occur in the south. Dr. Kain has described a group of six possessing this form in East Tennessee. Their proportions are ten feet in height, by thirty or forty paces in diameter, in the base; the whole group being enclosed by a ditch.

Mounds, having an exact rectangular form, are described by travellers as existing in Tennessee.

Mr. Bringier, describing the Indian mounds in the region of the Mississippi, states, that from Red river to St. Louis, a distance of five hundred miles, and in breadth eighty to two hundred miles, mounds constantly occur, and for the most part are symmetrically arranged, and contain human bones and other traces of man. This writer suggests, that they may be the ruins of ancient dwellings, constructed, on the old Mexican plan, of large bricks, and were covered with earth, which, mouldering down, left mounds in such abundance that the traveller is never out of sight of them. What an immense population, he observes, must have occupied these dwellings, which cover so large a portion of the surface of this region.

That some of the earthworks in the southern part of this continent are attributable to such an origin, appears to be the opinion of other investigators. Professor Rafinesque, on the authority of M. Rhea, states, that in an ancient walled town near Columbia, in Tennessee, are "the ruins of many houses of various sizes, from ten to thirty feet in diameter, all of circular form."

The conical form is the most prevalent in Ohio. Mr. Atwater has described many of these, and Dr. Drake, among others, has given the details of four large elliptical mounds within the limits of the city of Cincinnati.

It will be seen by a glance at our diagrams, that no precise position, with regard to points of the compass, determined the construction of the Wisconsin mounds; and that in one case a single member of a group of animals has been placed at right angles to the rest. The choice, in selecting the sites of these memorials of ancient days, appears to have been influenced mainly by the contiguity to the lakes and principal rivers, and to those great lines of interior communication which from an unknown period traversed this fine country. By this arrangement the greatest publicity was given to the burial places of the distinguished dead; to the simple yet permanent monuments erected to commemorate their fame and rank, and perhaps with the design to perpetuate the honor, and to flatter the vanity of some of the many tribes and branches into which this great Indian family appears, from remote times, to have been subdivided.

Learned archaeologists have speculated as to what nation, in far distant times, constructed the ordinary tumuli of circular form, so abundant in the great Mississippi valley. They have not yet, I believe, commenced to descant on the origin of those other configurations, the recent examination of which has given rise to the present article. From that highly important contribution to North American early history, the "*Antiquitates Americanae*," lately edited by the Royal Society of Northern Antiquaries of Copenhagen, little or no knowledge can be acquired respecting the mounds of North America; and the communication in the same work from the Rhode Island Historical Society, refers, for the most part, merely to the chiseled figures and hieroglyphics on the rocks of Rhode Island.

There are few, if any, authentic sources at hand, from whence to draw information, and it is no doubt quite unsafe to rely upon the accuracy of Indian traditions concerning these mounds, especially as the last occupiers of the soil were but comparatively in recent possession.¹⁷ Successive tribes have occupied, by turns, the region of country where these apparent animal and human effigies abound. The Win-

¹⁷ This is an important fact which is often overlooked by those arguing for the erection of mounds in this specific district by this or that local historic tribe.

nebago Indians, a branch of the great Dahcotah or Sioux family, have held possession of that part of the Wisconsin country which lies immediately south of the Wisconsin river, and east of the Mississippi, only from sixty to eighty years.¹⁸ Previously to this time the district was in the hands of the Sauks and Fox Indians, a branch of the Chipewas, who dug and smelted the lead ore, but were driven out by the Winnebagos. Neither of these tribes now erect permanent monuments of this character, to the memory of their dead. We have seen them, it is true, in numerous places, excavate graves, and deposit the remains of the deceased on the summits of the ancient circular tumuli, which they appear to conceive were constructed for such purposes.¹⁹ Some of these modern burial places are accompanied by rude memorials, denoting the tribe and rank, and sometimes by hieroglyphics, in red paint, even recording the principal achievements of distinguished individuals.

But to a far different race, assuredly, and to a far distant period, must we look when seeking to trace the authors of these singular mounds, and the earthworks of such various forms, which are spread over the North American continent, from Lake Superior to Mexico. The degenerate Menominees, and the slothful Winnebagos, are retiring before the power and the intelligence of the white man of the old world, as the Sauks and Fox Indians had previously retreated from the Winnebagos, and at a still earlier period, the Illinois Indians were nearly exterminated by the Sauks and Foxes. But who were they who have left almost imperishable memorials on the soil, attesting the superiority of their race? Nation and tribe and family succeed each other, and for a while occupy the land. They vanish in succession, and leave few or no traces. Yet of this unknown people, thousands and tens of thousands of monuments remain, which will scarcely be obliterated so long as the earth retains its present form.

¹⁸ Despite this fact, these mounds were definitely ascribed to the Winnebago by Radin and others within the last fifteen years, and one would encounter no great difficulty in finding local students who still support a Winnebago origin.

¹⁹ The origin of the intrusive burials so commonly encountered in the mounds.

The result of a recent examination, by a friend of the writer, of the interior of many of the Fox river mounds, shews satisfactorily that the animal shaped earthworks contain human bones equally with the round tumuli.²⁰ These bones were found in a very brittle and decomposed state, having roots and fibres growing through them, and were distributed, commonly, through every part of the mounds. These researches also threw some light on the mode adopted in the construction of these monuments; for it became evident that the bones or bodies of the deceased were originally laid upon the surface of the ground, and the earth was then heaped upon them. No appearances occur of graves being dug beneath the surface, in the first instance. Upon the summits of many of the original tumuli it is evident that the remains of other deceased persons have been subsequently placed; and a new heaping up of soil thereon contributed to augment its former height. Finally, the wandering Menominee or Winnebago, the last Indian occupant of the prairie, excavates a grave upon the summit, places the body therein, in a sitting or reclining position, and strongly defends it with pickets.

That the more ancient form of burial upon the surface, and of accumulating the soil over the remains of the dead, was not universal among the Indian tribes of North America, appears from the examination of M. Rhea of some antiquities in Tennessee, where, within the ruins of an ancient town or village, fortified with walls, "graves are found in abundance, from one to three feet in depth, containing human bones. The bodies seem generally to have been buried in a sitting posture, with flat stones placed around and over them." I observed a grave or sepulchre of this kind on the summit of the natural hill, of limestone, called Sinsinnawa mound a few miles north of Galena.

Whilst endeavoring to ascertain the origin of the animal forms, adopted in the Wisconsin territory for monumental purposes, the writer became early aware of the embarrassments attendant on all researches in Indian archaeology.

²⁰ Despite this early discovery of burials in effigy mounds, they were generally considered as ceremonial structures as distinct from burial tumuli to within fifteen years of the present date, and one still hears the term "burial mound" as distinct from effigy mound.

It has been suggested, that they might be designed merely to record the achievements of certain chiefs in hunting. That they were sepulchral, and enclosed the remains of human beings, has been proved by the recent examination of many earthworks which have the peculiar forms noticed in the preceding pages.

Concerning these ancient memorials of a by-gone people, viewing them as commemorative of the dead, it has occurred to me that they may have served in some way to designate the respective tribes or branches to which the deceased, in whose honor the structures were reared, belong. Even at the present day it is an undisputed fact, I believe, that certain, perhaps most, Indian families and even tribes or branches, are distinguished from each other by badges indicating particular animals, or objects; or by devices symbolical of some memorable national event or peculiarity. In the same mode, and for the same purposes, many individuals also, among the more remarkable of their warriors, assumed similar devices; commemorative of personal prowess, of success in the chase or in war; and were further distinguished among their friends and adherents, by titles equally characteristic. Thus have we seen, even within the space of a few months from the time of writing this article, the survivors of an Indian chief recording at the head of his grave, by some rude hieroglyphics, the tribes and attributes of the deceased. And this is Indian heraldry: as useful, as commemorative, as inspiring to the red warrior and his race, as that when in the days of the crusades, the banner and the pennon, the device and the motto, the crest, the shield and the war cry, exercised their potent influence on European chivalry.

In all times have nations adopted and men arranged themselves under badges and symbols, to which custom and long cherished associations endeared them. Yet were they of no higher import than those of the North American Indian. In the earliest periods men rallied around the sacred person of the standard bearer, with equal self-devotion, and perished in its defence with as much heroism, as after generations have perilled life to guard the consecrated banner, or in our day have died to maintain the glory of a national flag. So far back, even, as the time of Moses, standards were

employed to distinguish the different tribes of the children of Israel. There was an assigned place to each banner in the order of the march of the entire host; and all men were directed "to pitch their tents by their own standards, every one after their families, according to the houses of their fathers."

From that time to the present, in nearly all stages of society, may be traced the existence of symbols which were adopted for purposes of a like kind; certain natural objects being commonly selected to designate particular races, nations, or tribes. Among many of such nations, these badges were emblazoned on their military standards, and depicted on their commercial flags; they were sculptured upon their monuments, portrayed upon their escutcheons, incorporated with their architecture, inscribed upon their seals, and impressed upon their coinage. We are informed that the kings of the Medes bore golden eagles upon their shields; that the Greeks, the Trojans, and other warlike nations, had devices painted or sculptured upon their shields and helmets; and that the ancient Germans bore standards before them in battle.

The Roman legions planted the imperial standard over a large portion of the then known world. By turns, the shores of Albion have been invaded by the Roman eagle, the Danish raven, the white horse of Saxony, and the Norman lion.

And then, when the followers of the cross led on their marshalled thousands to war against the crescent, what hosts of devices, cognizances, achievements, and symbols, were emblazoned on banner, crest, and shield,—devices derived alike from natural and from imaginary objects, and born in commemoration of noble deeds, and indicating rank, and honor, and high resolve. Under the red cross of St. George, the lily of France, and a multitude of other standards, the leaders of the soldiers of Christendom were individually distinguished by their own proper heraldic bearings.

That spirit which the olden time originated, and which was so strikingly displayed by the chivalry of the middle ages, has, it is true, been modified; and as regards individuals, has been almost obliterated under the changed aspect

of the civilized world. But with regard, perhaps, to all existing nations, these symbols are yet associated with the spirit of patriotism, with national honor, or with deeply cherished remembrances of ancient grandeur. The crescent of the Ottoman empire still shines in the East; the fleur-de-lis of France, originating at least as early as the fifth century, is still her honored emblem; the lion of England, that for "a thousand years has braved the battle and the breeze," yet remains a cherished symbol; and, although arising in later times, the eagle of America is no less an object of national pride and endearment.

The foregoing remarks arise out of the obvious similarity of method by which, in all times and in all countries, men, whether barbarous or civilized, have found it convenient to distinguish and arrange themselves. If the untutored Indians have adopted, as the badge of their nation, their race, or their kindred, some simple object in nature, so also have the more refined of the old world constantly pursued the same mode; and doubtless, one common motive led the people of Scotland to select the thistle, those of Wales the leek, of Ireland the shamrock, and of England the oak, for their national emblems; with each and all of which many fond recollections are associated. Thus also did the white and red roses of the rival houses of York and Lancaster, designate their leaders and unite their followers; and the same feeling which gave rise to the local badges of the numerous Scottish clans, may be traced among the North American tribes, and in like manner, suggested the insignia of numberless orders and associations in the civilized world. If the mail-clad knight of old surmounted his helm with appropriate symbols of courage in the field, of devotion to the true faith, or of constancy to his ladye love, so also does the red warrior assume the attributes of fierceness, of strength, revenge, or cunning—qualities which rank among the highest in his esteem—in the trophies of the eagle, the bear, the serpent, or the fox. If among the boldest of knights and kings, Europe had her *Coeur de Leon*, so have the chiefs of our Indians, though far less known to fame, their appellations; such as the Black Warrior, the Grizzly Bear, the Swift Deer, the Watchful Fox, the Rolling Thunder, and the North Wind. And if in the proudest days of romantic chivalry,

amidst the gorgeous panoply of the court, the tournament, or the battle field, all eyes might recognize him of the Falcon, the Leopard, or the Bloody Hand, so also in humbler guise, yet with not less pride of heart, have the brave of our aboriginal Indians commonly been distinguished. No heroes of Greece, or Rome, or the Holy Land, were prouder of the badges of victory and the trophies of conquest, than are the natives of our western world. Within their own limited sphere, they appear to have sought distinction and to have earned characteristic titles, by the exercise of those qualities which are most estimated in savage life; and our own ears are familiar, even at the present day, with such titles as the Black Hawk, the Panther, Alligator, and Rattlesnake; the Young Eagle, the Black Wolf, the White Dog.

But it was not individuals, merely, by whom such appellations were borne. We have good evidence that many tribes of North America adopted, and even yet retain for their badges, the simple natural objects whose names they also bear; as in the mentioned instances of the Fox, the Turtle, and other tribes. Information on this head may be found in Colonel McKenney's work "On the Indian Tribes of North America." Another writer, familiar with Indian history, states that "all the Indian nations are divided into tribes, after the manner of the Jew."

The Shawanese nation was originally divided into twelve tribes, or bands, all of which tribes were subdivided, in the usual manner, into families or clans, of the Eagle, the Bear, the Turtle, & c. These animals constitute their "totems," among which is the family or totem of the Panther, which sprung from the Kickapoo tribe.

The Crane was the badge of a branch of the Chippewa tribe, as was, doubtless, the Fox of another. The authority last quoted, notices that the Winnebagos, like the Algonquin, and other tribes, are divided into bands, each designated by some animal, as the bear or by the devil or some bad spirit. Among the clans or bands of the Mohawks, were those of the Bear, the Wolf, and the Turtle. The Hurons also had a Bear clan. The Natches, who lived on the borders of the Mississippi, had four clans, or classes; the Sioux proper were subdivided into seven bands, and the southern Sioux into eight tribes, each being separately classed by

some characteristic name. Whether the southern Indians were similarly subdivided and distinguished does not appear. From the different structure and form of their monuments, it is not improbable that there always existed a variety of races upon this continent. And if in remote times those races were classified and designated in the mode which we have seen still exists, and long has existed,—that is to say, under the denomination of particular animals,—it is not altogether incompatible with probability, that the earth-works in which their dead were deposited, and which resemble certain animal figures, were in fact designed as representations of those national or family badges, and consequently pointed out the burial place of the members of those particular tribes.²¹

I confess that I am aware of no positive evidence to show, that any existing tribes or branches, thus distinguished by a species of armorial bearings, actually did erect monuments of earth in the shape of animals whose names they bear. In the absence of a more plausible conjecture, the idea suggested itself, perhaps on very insufficient grounds, that there might be some connection traced between the animal shaped configurations abounding in the west, and some of the tribes who assumed animals for their badges, and classed themselves under their names.

If, as is perhaps the case, the foregoing views are inadequate to establish the heraldic character of some of the monuments of the aborigines, they show at least that to the same common cause may be traced, at every period in the recorded history of man, in all countries, and in every stage of civilization, the adoption of symbols and devices, derived from the simplest objects yet characterizing nations, orders and classes, and even the individual members of communities.

Philadelphia, Feb. 12th, 1838.

²¹ These tentative conclusions of a century ago adequately sum up all that is known or logically surmised at the present time regarding the purpose of effigy mounds. In other words, in regard to this particular problem, exactly no progress has been made in the last ten decades.

EARTHWORK ANTIQUITIES IN WISCONSIN TERRITORY

By John Locke, M. D.²²

I present this subject, not as a discovery, but merely to add such evidence to the discoveries and publications of others as seem, from the doubts I have heard so repeatedly expressed, to be necessary to convince the majority of readers of their correctness. In the 34th volume of "Silliman's Journal," is a communication from Richard C. Taylor, Esq., on the subject of these identical works, in which he describes them as being "in the form of animal effigies." The figures given by Mr. Taylor are so unlike any ancient tumuli in other parts of the country, that I had, ever since noticing them felt a strong desire to examine the originals. On entering Wisconsin, I was so engaged in other pursuits that I had forgotten the "effigies," until upon examining the "sandstone bluffs," eight miles east of the Blue Mounds, I literally stumbled over one of them, overgrown with the rank prairie grass. I was at once convinced of the correctness of Mr. Taylor's representations, and not a little astonished that some well-informed persons there, in the midst of these strange groups still pretend to dispute their artificial origin. The same ambition to exercise an independent judgment might lead the same individuals to dispute that the ruins of Herculaneum are artificial; the same argument might be used—"that they just come so in the earth." Without going into any discussion in regard to the origin, history, or design of these figures, I shall merely represent their form and dimensions with as much accuracy as a very particular survey of a few of them enabled me to attain. I shall not even pretend to say that they are like animals; for this the reader can determine for himself. I have not attempted, in any degree, to represent them as they might once have been, but exactly as I found them on the day that I surveyed them.

²² First published, without illustrations, in U. S. 26th. Cong., 1st. Sess., House Ex. Doc. 239, 1840.

Republished, with illustrations reproduced herein, in U. S. 28th. Cong., 1st. Sess., Senate Ex. Doc. 407, 1844.

The method pursued in making the surveys is represented in plate No. 1, Antiquities. Here, for convenience, I make use of the names of the parts of an animal. The figure delineated is the foremost one of two, between which the road passes, and which are on the verge of a small prairie, about ten miles east of Madison, the capital of Wisconsin. Small

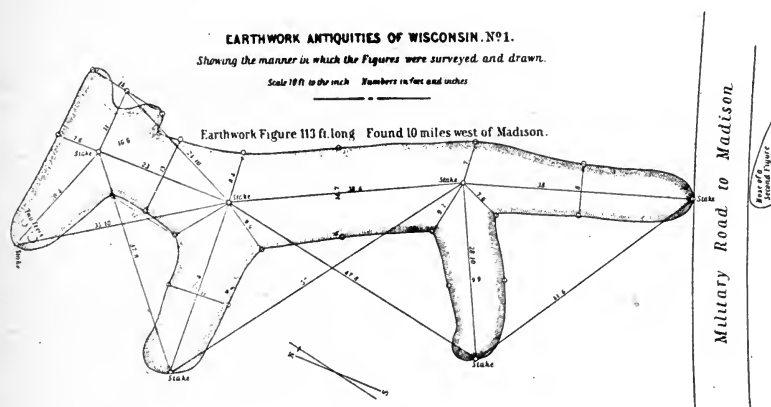


FIGURE 2

stakes were set in the following points, viz: the eye, the fore foot, the shoulder, the hip, the hind foot, and the end of the tail. The angular positions of these and other-points were determined by measuring, with a tape measure, the sides of the several triangles which those points form in such a manner that the determined side of one triangle shall be the base of a new one. After the determination of all the triangles, their several diameters and distances were measured and noted; and, finally, to determine the bearing of the whole figure, the magnetical bearing of the line from the hip to the shoulder was registered on the field-book.²³

The following is a copy from the field-notes, in reference to the above figures. (See Antiquities, plate No. 1.)²⁴

²³ The detailed accuracy which must necessarily result from such a survey answers a question raised by some students regarding the accuracy of any data of this nature obtained without the use of surveyor's instruments. One is impressed by the high quality of work turned out by the first students of Wisconsin archeology.

²⁴ Fig. 2 of this issue.

Triangles	Feet	Inches
Eye to shoulder -----	23	0
Shoulder to foot -----	29	4
Fore foot to eye -----	37	8
Eye to nose -----	20	4
Nose to shoulder -----	35	10
Eye to point halfway between the ears -----	11	0
Shoulder to same point -----	24	10
Shoulder to hip -----	38	4
Fore foot to hip -----	57	0
Shoulder to hind foot -----	47	8
Hind foot to hip -----	28	10
Hip to the tip of the tail -----	38	0
Hind foot to the tip of the tail -----	41	6
Diameters	Feet	Inches
Of the neck -----	13	0
Of the fore leg -----	11	0
Of the body -----	14	7
Of the hind leg -----	9	9
Of the tail -----	8	0
Distances	Feet	Inches
From the eye to the front -----	7	6
From one ear to the other -----	14	0
From shoulder to armpit -----	9	9
From shoulder to back -----	8	4
From hip to rump -----	7	0
From hip to flank -----	9	7
From hip to insertion of the tail -----	7	6
Length of the throat -----	12	0

Observations.—Ears distinctly separated. Two trees, sixteen inches in diameter, growing in the nose. Ground sloping gently towards the feet. Both the fore and hind legs curved a little backwards. The tail a little hollowed on the upper side. Height, or relief of the figure above the natural surface, about three feet; and the back somewhat steeper than the belly. Bearing of hip to shoulder N. 38° W.

It will be seen, by examining the above notes, that they determine twenty-five points in the circumference of the figure; and that the connecting of these points by lines, and thus completing the outline, permits no exer-

cise of imagination. The figure from the earth is simply transferred to the paper on a scale of the one hundred and twentieth part, in linear dimensions. Seven other figures were surveyed with the same degree of particularity, and the distances between them, and the relative positions of the same group, accurately noted. They are represented in the three following plates, on a smaller scale of forty feet to the inch. That which is above described, and represented on plate No. 1, is again represented on the small scale "Plate No. 4, Antiquities," as figure 8.²⁵

The "military road" from Prairie du Chien to the Four Lakes, after crossing the Wisconsin river, and ascending a small tributary, occupies the height or dividing-ridge between the waters of the Wisconsin on one side, and those of Rock river and some smaller streams on the other, for the distance of eighty or one hundred miles, occasionally descending into a moderate valley, and crossing a small rivulet, a head branch of some of the incipient streams. Most of the route is on a high open prairie. From the Blue Mounds eastward to the Four lakes, the country abounds with the earthwork antiquities, of the origin of which the present aborigines are as ignorant as ourselves. About seven or eight miles eastward from the Blue Mounds, the road descends into the valley of a head branch of Sugar river, a tributary of Rock river; and here, near a bluff of sandstone of a very picturesque and fantastic outline, commence our particular descriptions.

Antiquities, plate No. 2,²⁶—This plate represents a group of works about eight miles east of the Blue Mounds. It is on the great road from Prairie du Chien, through Madison, to Lake Michigan; a road so decidedly marked by nature, that I presume it has been the thoroughfare—the "trail" the great "war-path"—ever since the region in the vicinity has been inhabited by migrating man, and will continue to be his pathway until the hills and the rivers exchange their places. The sand-bluff surmounted with pines is here a picturesque object; and the streamlet and springs not very distant with a few scattering trees for fire, have long made it a camping-

²⁵ Fig. 5 of this issue.

²⁶ Fig. 3 of this issue.

ground. Mr. Taylor has represented only one of the two "effigies" which occur at this point; the other was probably so overgrown with grass and small hazel-bushes as to escape his observation. Our encampment was near this place; and,

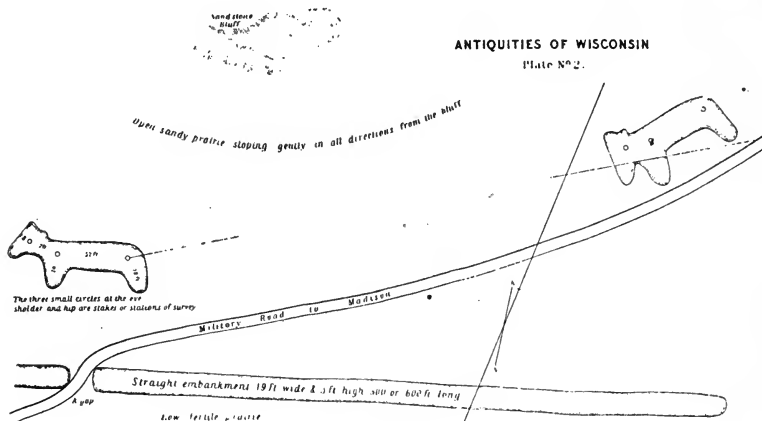


FIGURE 3

in the midst of some discussion with regard to the tumuli, they were opened to see whether they were stratified, and whether the black mould continued underneath them, even with the surrounding surface.²⁷ No. 2 was composed of sand, without any change to mark an original surface below, although it is now overgrown with grass, and is covered with a thin black mould. The whole of this descent, near the bottom of which the figure lies, has evidently been formed by the disintegration of the soft incoherent sandstone bluff contiguous; and, at the time of forming this tumulus, it was very probably destitute of loam at this point, as it now is at a point still nearer the bluff. A section of the embankment, near the gap, exhibited a thin line of loam, even with what might be supposed to have been the original surface of the ground. Alluvial stratification is positive proof that a formation is not artificial, but the absence of a base of mould is not positive proof of the same thing; for the constructors may have removed the surface on commencing

²⁷ How rich in information we now would be if all subsequent excavators in mounds had been directed by a similar desire to obtain a record of such structural and other obscure details rather than concentrating their efforts toward the securing of fine artifacts alone.

their work.²⁸ Many of our tumuli have not only a base of mould marking an original surface, but ashes, coals, bones, and artificial implements deposited at the bases of tumuli, of various forms and heights, from two to seventy feet.

In examining the tumuli of Wisconsin, I did not at any place discover a ditch or cavity from which the earth to construct them had been taken. They abound along the natural road, occupying the fertile and commanding hill-tops, and the gentle slopes into the valleys; being uniformly raised from a smooth and well-formed surface, always above inundation, and well guarded from the little temporary currents produced by showers.

The backs of the "effigies" were uniformly placed uphill, and the feet downward, as at the sand-bluff.²⁹ There are some points on the surface of soft ground, where we naturally expect chasms, rugae, mammillary points, and undulations. These occur from the uprooting of trees, from avalanches, from the settling of banks, from the action of temporary streams and currents of water. Mammillary points are often left along the sharp crest of a hill; and insular mounds are not unfrequently left in low alluvial bottoms; certain points of upland having withstood that action of the currents which has carried away and degraded the surrounding surface to a lower level. But there are other situations where we expect to find, and do actually find, the surface evenly graded into smooth undulations, as on the dividing tables between the heads of streams, and in the tops of moderate hills, where no current has room to accumulate; and especially if the same region be prairie, with the surface protected by the strong roots of wild grasses.

Just such a situation is this part of Wisconsin where the geologist suddenly and unexpectedly meets with these groups of gigantic basso-relievos, which appear to him as decidedly artificial as the head of Julius Caesar on an ancient coin, notwithstanding anything which may be imagined or said to the contrary.

²⁸ These simple facts are self apparent, but remain unknown to many of those interested in archeology nearly a century after the initial publication of this article.

²⁹ Our present knowledge of effigy mounds shows a general absence of this uniform orientation of mounds in relation to adjacent natural features.

Antiquities, plate No. 3.³⁰—The first or left-hand figure on this plate, (marked 3) is about one mile and a half from the bluff above described. It appears to be solitary; lies on a low, level, smooth ground, and seems to have been mutilat-

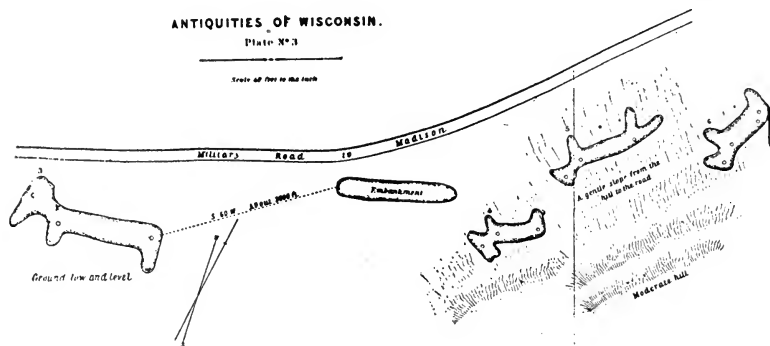


FIGURE 4

ed; the parts which I have called the legs seem to have been partially washed away. If intended to represent an animal, the head is evidently too large, and the altitude very stiff and rectangular. But I have drawn it as I found it, without any inclination to make it more like an animal than it was made in the original design, with all of the defacements which several hundred years have imprinted. The distance from this third figure to the next group is diminished on the plate. It is really one-fourth to one-third of a mile, where, on our progress towards Madison, we approach the termination of the valley in which our figures, so far, have been sketched. Here, upon the side of a hill sloping gently toward the road, are three figures, and an embankment; the sizes, distances, and relative positions of which have all been drawn to a uniform scale of forty feet to the inch.

Antiquities, plate 4.³¹—Leaving the group last described, and proceeding still eastwardly towards the Four lakes, we ascend a ridge, and pass out of the valley containing the six figures represented on plates 2 and 3. The road for about two miles lies over broken, thinly-timbered ridges, beyond which it crosses a small prairie, and again enters woodland. Just at the entrance of this woodland are the two figures

³⁰ Fig. 4 of this issue.

³¹ Fig. 5 of this issue.

sketched on the plate, and numbered 7 and 8. The pathway passes with scanty space, between the nose of the one and the tail of the other. These, as appears in the drawings, are the most perfect, if we consider them as "effigies" of animals, of any of the figures here represented, and are singularly alike in their form and dimensions. A short distance (500 or 600 feet) to the west of them is a natural swell of ground, with an artificial circular tumulus on the top of it, overlooking the two figures.

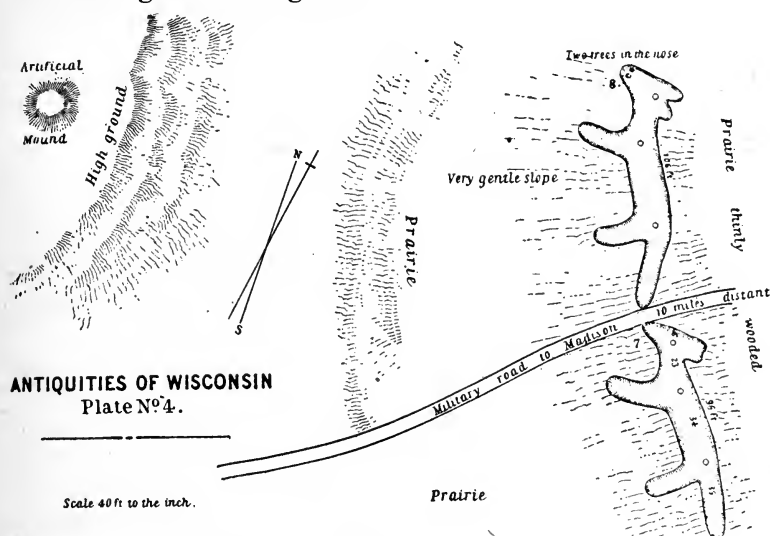


FIGURE 5

If these figures were originally intended to represent animals, they might have been much more distinct and specific than they now are. It is obvious that any minute delineations must soon be obliterated by the agency of the weather. Most of them have the upper-part of the head, the ears, or antlers, apparently too large—at least it appears so in the drawings. But this part, in the originals, is not raised from the ground so high as the other parts, and appears like several small parts trodden down and blended together. In the eighth figure especially, there is a decided notch or separation still remaining between the two horns or ears. They are the favorite resort of badgers; who finding them raised and dry, have selected them for burrowing; and it is wonderful that they retain their outlines so perfectly. But, above all other

creatures, civilized man will obliterate them the most speedily; and it is much to be regretted that the multitude of extraordinary figures raised like embossed ornaments over the whole of this part of the country, could not be accurately measured and delineated before they shall be obliterated forever. The reader will please to observe that these observations were made, as it were, by stealth. I had other duties to perform and was enabled to take these measurements by an enthusiasm which awoke me in my tent at midnight, assisted me to prepare my breakfast before day, and sent me into the cold bleak fields on a November morning, to finish the admeasurements of a whole group of figures, before the usual time of commencing the labors of the day. I had no time to turn aside to examine still other groups, evidently more extensive and interesting than those which we have endeavored to represent. Mr. Taylor has represented the effigies of birds, and one of the human figure, as occurring here; and I am happy, with a full conviction of the general accuracy of his representations, to call the reader's attention to his interesting paper.

On one of the hills I saw an embankment exactly in the form of the cross, as it is usually represented as the emblem of Christianity. Some of the surveyors brought in sketches of works in the form of birds with wings expanded; and I heard of others in the form of lizards and tortoises. From what I have seen, I should think it very probable that these forms are to be found. But, in order that their existence should excite in the public that interest which, as relics of ancient history, they really possess, they should be so exactly surveyed and depicted that their representations can be relied upon with confidence. I object to the very careless and imperfect manner in which most of our antiquities have been examined, by which they have been rather guessed at than surveyed.³² Although I have given a pledge not to undertake to make animals of these figures, yet, to the eyes of all, except very sagacious people, they will look very like animals; and the question will arise, what kinds of animals were intended to be represented? In the originals, the size is so great, and the outline more or less obscured by herbage and undershrubs, that the impression of an effigy is much

³² The objection might still be voiced with equal emphasis.

less decided than when the same is diminished and brought into one point of view, in which all the parts are under the eye at once. A comparison of the difference of expression, form, and attitude, does not strike one at all in the originals, while it is very decided in the diminished copies. Mr. Taylor suggests that those were intended to represent the buffalo, though he acknowledges the representation to be imperfect, especially in wanting the "hump". It appears to me that the figures 1, 2, 3, and 6, might have been intended as effigies of the bear; the clumsy proportions, and want of the caudal appendage, appear like that animal. Figure 5, 7, and 8, have decidedly an expression of agility and fleetness. They may have been intended for the cougar, or American tiger—an animal still existing in that region. The only general disproportion to that animal is the length of the head.

I have thus, my dear sir, laid before you, as well as circumstances would permit, the result of a few hours' very hard labor in the examinations of the antiquities of Wisconsin, with the faint hope that, from some source or other, there may emanate an interest sufficient to cause an accurate and general survey and history of them to be embodied and preserved. I know of no prospective volume which I should open with more interest than an accurate representation of all of our remaining earthwork antiquities.³³

³³ Such a complete record, due to the destruction of un-mapped mounds which has already taken place, can never be realized, and the continued destruction of mounds each year reduces the possible degree of completeness of our records more and more.

ARCHEOLOGICAL NOTES

Wisconsin Field Work

The second largest bundle reburial ever reported from a Wisconsin mound was uncovered this summer in a large conical mound, one of the Raisbeck effigy mound group in Grant County, as the result of excavations conducted by the Milwaukee Public Museum, under the personal direction of W. C. McKern. Thirty-five skulls were present in the ossuary, with a large quantity of other skeletal materials. A majority of the bones were in a fair state of preservation and have been added to the osteological collections of the museum. A larger bundle reburial was excavated by Dr. S. A. Barrett at the Kratz Creek Group, Marquette County, in 1917. Associated with the bones of the Raisbeck mound burial were two pottery pipes and an unclassified artifact fashioned of turtle bone. In all, twenty burial mounds, of effigy, conical and linear shape, were excavated. The first extended burial ever reported from a tumulus of an effigy mound group was encountered in one of the mounds.

Mr. Alton K. Fisher has recently completed for the Milwaukee Public Museum an archeological survey of Washington Island. Eleven camp sites, all bearing evidence of the Lake Michigan pottery industry, were located and mapped. A few sherds of the Upper Mississippi type of pottery were found at one site. A survey of the entire beach line failed to disclose petroglyphs previously reported there. No mounds were found. A "cemetery" reported at the northwest beach of Detroit Harbor was shown, by excavation, to consist of a series of windfall mounds. The survey was conducted for the purpose of checking up on previous surveys and reports, and recording sites not previously reported.

During the past summer, Mr. Arthur Kannenberg, of Oshkosh, was engaged for more than a month in excavating for the Milwaukee Public Museum an ancient village site in the city of Oshkosh, reputed to be a proto-historic Winnebago camp site. A large quantity of culture detritus, in refuse pits and associated with stone fireplaces, was obtained, including implements and ornaments of shell and bone, chipped-stone artifacts and a fine series of potsherds. All these materials are representative of the Lake Winnebago variant of the Upper Mississippi culture. A number of interesting burials were also encountered. The work was conducted with great care, the exact lateral and vertical position of each specimen and feature carefully charted, and it is hoped that a detailed study of the materials may determine growth changes in the culture represented during the period from pre-historic to proto-historic times. Examinations of several reputed Winnebago camp sites in Winnebago County have produced data which support the theory that the Lake Winnebago variant of the Upper Mississippi culture is to be identified with pre-historic Winnebago culture.

Mr. Geo. L. Pasco, of Ripon, assisted by Mr. Walter Walker and his sons, has devoted a considerable amount of time recently to the excavating of a pre-historic burial ground on the property of Mr. Walker, Green Lake County. Eight burials in the flesh have been located, of which six were extended, prone on the back, one was partially flexed and one apparently was carelessly rolled into a pit where it assumed a haphazard position not typical of any known type of prehistoric Wisconsin burial. Culture materials associated with the remains, consisting of copper beads, shell and bone implements, pottery fragments and one small celt, identify the culture respon-

sible for these burials as basically the same as that responsible for the erection of the adjacent Grand River mounds, a variant of the Upper Mississippi culture. It thus becomes apparent that this ethnic group did not bury its dead in mounds exclusively, and that outside the mounds the extended position was more commonly employed than in the mounds. The well preserved skeletal and cultural remains collected from these graves have been deposited in the Milwaukee Public Museum.

Mr. Philleo Nash, of Wisconsin Rapids, with the assistance of Mr. L. J. Dartt of Montello, and others, has excavated a number of mounds of a group of effigy, conical and linear tumuli near his home. The burials in the mounds were found to have entirely disappeared due to decomposition and were indicated alone by the presence of the burial pits and typical burial discoloration. The placement of burials, the association with burials of features which appear to have been food offerings, and the artifacts found are typical of the Effigy Mound culture as determined from research in other effigy groups.

New Pottery Finds

Mr. Iran Otto, of Milwaukee, has recently found, at a camp site in Green Lake County, a broken but practically complete pottery vessel of most unusual type. The vessel is of heavy, grit-tempered ware with the cord-imprinted outer surface additionally decorated with a single lateral band of thumb-and-finger imprints above a second band of small circular indentures. It stands fourteen and one-half inches in height and is ten and one-half inches in diameter at the rim. Its remarkable feature is its shape. Tapering gradually from the straight vertical rim toward the base, it culminates in an abruptly flat bottom, not unlike that of a flower pot. The pot has been restored for Mr. Otto by the Milwaukee Public Museum.

Mr. Arden Sheldon of Oshkosh has found at a camp site in Winnebago County the intact lower half of a good-sized pottery vessel of grit-tempered, cord-imprinted ware, to be classified as a product of the Lake Michigan culture. Unfortunately, no single fragment of the missing rim was encountered.

It is reported that Mr. Clarence A. Rothe, of Green Bay, recently found a pottery vessel of medium size near his home city.

Mr. Henry Damerau, of Fairwater, reports that he has found a pottery vessel, badly broken but with the majority of the parts represented, at a camp site in Green Lake County.

Mr. Milton F. Hulburt, of Reedsburg, has been busily engaged during the past year, as a part of his general survey work, in making a pottery survey of Sauk County. Sherds are being collected from all known camp sites, and a number of new sites have been discovered. So far, wares representative of three distinct cultures have been encountered.

Reports from Neighboring Fields

The first Plains Archeological Conference was held at Vermilion, South Dakota, August 31 to September 3 of this year, under the auspices of the University of South Dakota. Archeologists active in the plains and neighboring middle western fields were present, including representatives from Colorado, Wyoming, North Dakota, South Dakota, Nebraska, Iowa, Minnesota, Wisconsin, Michigan and the Smithsonian Institution. One or more speakers for each state gave a brief summary of the salient archeological features of his area, and these talks were followed by general discussion and the examination of typical specimens from each of the described areas. Em-

phasis was placed upon the need for the full co-operation of all toward the accurate definition and solution of problems. Your editor was particularly interested in noting that the great woodland pottery industry, of which our Lake Michigan type of ware is the local representative, extends westward entirely across the great plains to the Rocky Mountains, and that the culture which is called Upper Mississippi in Wisconsin is one of the outstanding plains cultures. Through the courtesy of Prof. W. H. Over, Curator of the Museum, University of South Dakota, a pilgrimage was made to certain typical ancient village sites along the shores of the Missouri River. At the final meeting it was voted to make the conference an annual affair, and an invitation to meet at Lincoln next year was accepted.

The excavation of a small mound of the Cahokia Group, near Collinsville, Illinois, conducted by a University of Illinois party under the direction of Dr. A. R. Kelly, has resulted in the discovery below the mound floor of an old Cahokia camp site, which is producing an important series of artifact materials illustrative of that culture. This is of special interest to students of Wisconsin archeology since the Cahokia culture is that most plentifully represented at the Aztalan site in Jefferson County.

Dr. P. F. Titterington, of Saint Louis, has partially completed the excavation of a burial mound in western Illinois, near the Mississippi River. This research has produced some exceptionally interesting information. The mound is low and elliptical in shape. A total of fourteen burials were generously distributed over the burial floor of the mound, including flexed, partly flexed and extended types. Several of the flexed individuals had the hands placed upon the shoulders. Two good-sized pottery vessels were found associated with the burials. The mound, of which only a part has been excavated, will be subjected to further investigations early next year.

Miscellaneous

Our esteemed secretary, Charles E. Brown, Director of the State Historical Museum at Madison, has received, as a mark of appreciation for his many years of valuable services in the fields of Wisconsin history and anthropology, the honorary degree of master of arts from the University of Wisconsin.

Mr. Brown this year completed thirty years of service as editor of *The Wisconsin Archeologist*.

The Wisconsin Archeologist

Vol. 11

January 1932
NEW SERIES

No. 2



**PUBLISHED QUARTERLY BY THE
WISCONSIN ARCHEOLOGICAL SOCIETY
MILWAUKEE**

WISCONSIN ARCHEOLOGICAL SOCIETY

The Society is a state department, receiving a part of its support from the state. Its funds are under state control. Its work is well and widely known. It has received the approval of leading American archeologists, who agree that it deserves the full support of all Wisconsin citizens interested in the state's archeological history.

The Society's activities comprise the location, recording, investigating and preservation of Wisconsin Indian remains, folklore and history, all of which are rapidly disappearing and must be recorded and saved immediately if ever.

Through its efforts many fine groups of Indian earthworks and other aboriginal monuments and remains have been permanently preserved to the public. Most have been marked with descriptive metal tablets. Others are being protected. Surveys and explorations have been conducted in many sections of the state.

It is also engaged in encouraging the establishment of public museums and collections and in discouraging the manufacture and sale of fraudulent antiquities.

Regular monthly meetings of the Society are held during the months September to May, inclusive, in the Trustees Room of the Milwaukee Public Museum. Meetings are open to the public. No regular meetings are held during the months June to August, inclusive. Special field meetings are occasionally held during the vacation months.

The results of its research and other activities are made known through its regular quarterly publication, *The Wisconsin Archeologist*. Thirty volumes have appeared. The Society has a large membership distributed through every part of the state.

It is co-operating to the fullest extent with all of the various scientific and educational organizations and institutions of Wisconsin.

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MILWAUKEE

Wisconsin Archeological Society

Milwaukee, Wisconsin

Incorporated March 23, 1903, for the purpose of advancing the study
and preservation of Wisconsin antiquities

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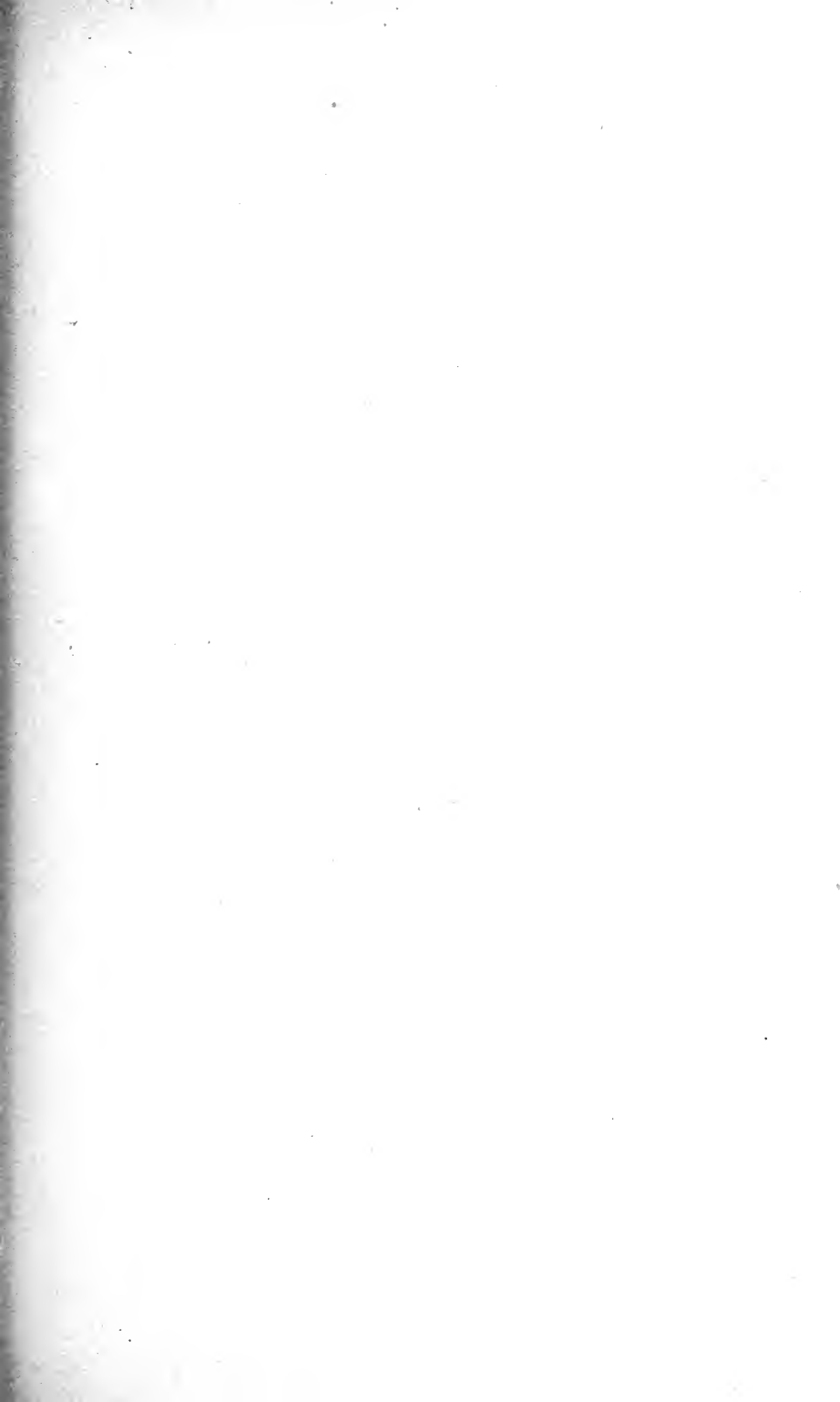
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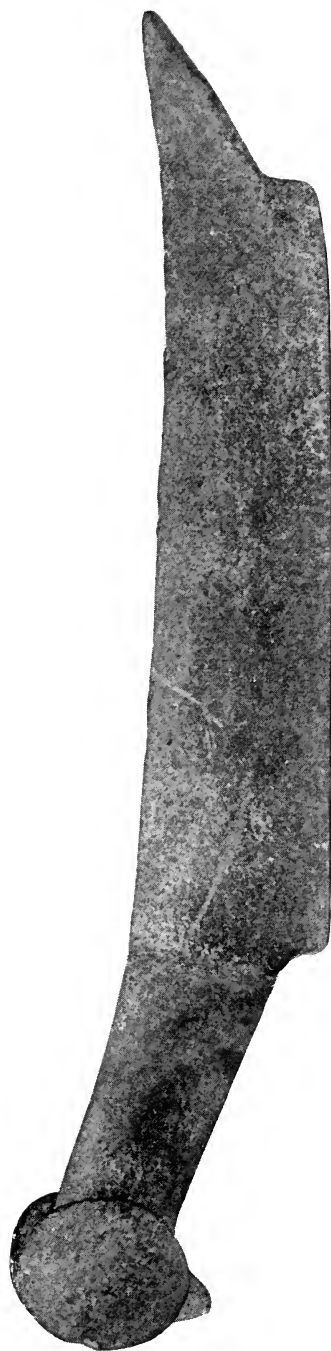
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Birdstone of limestone, Ringeisen collection

The Wisconsin Archeologist

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No. 2

BIRDSTONES OF NORTH AMERICA

Jos. Ringeisen, Jr.

Of all prehistoric Indian relics, the birdstone is least known. It is very obvious how stone axes, celts, spears, arrowheads, gorgets and other artifacts were used by their aboriginal owners, but due to a lack of information from the first white men among the Indians, nothing is known about the use of birdstones. How, by whom and on what occasions they were worn still remains a mystery. Archeologists generally agree that these objects had a religious significance and were held in high veneration by their Indian owners, as very few of these specimens show evidence of having been broken while in possession of the Indians. A study of most of the broken birdstones I have seen, and information I have received from birdstone collectors in Michigan, Ohio and Indiana, show that they were broken by the white man's implements; the plow, disc, harrow and the hoe.

Some of the early writers claim that the birdstone was worn on the head by women when pregnant. If this were true, birdstones would outnumber all other specimens. Others say that it was fastened to a stone tablet, such as a gorget, but we have still to find the first gorget or tablet on which the perforations correspond to the holes of a single birdstone. All theories advanced so far can easily be disproved. One man's guess is as good as that of another. I shall make mine later. Without a doubt, birdstones were fastened to some perishable material, such as wood or bone, which would rot away, leaving only the birdstone and thus making it difficult to ascertain how they were used or worn.

With the exception of fluted axes, birdstones are the most rare of all prehistoric Indian relics encountered within the birdstone-producing territory (frontispiece). In Wisconsin the birdstone is more rare due to the fact that the fluted

ax originated here and, consequently, is more numerous represented. When two collectors meet, the usual greetings are followed by the question, "How many birdstones have you?" In 1909, when our secretary, Chas. E. Brown, wrote his first birdstone bulletin (Wisconsin Archeologist, No. 1, Volume 8), he had the record of only 54 specimens from Wisconsin, and Warren K. Moorehead, of the Andover Museum of Massachusetts, who was probably the best posted man at that time, due to his travels all over the United States in the interests of archeology, stated that he knew of only 264 birdstones in both private and public collections in the entire United States. We know that these figures have been greatly increased in the last 22 years. Approximately, I now know of 69 birdstones in Wisconsin, 202 in Michigan, 145 in Ohio, 152 in Indiana, 23 in New York, 20 in Pennsylvania, 18 in Illinois and 16 in Canada. I know that 650 specimens will more than cover all the genuine birdstones in public and private collections both in the United States and Canada, in fact, we may say in the world; so you can see that they are comparatively rare. The Wisconsin specimens are distributed as follows: the Milwaukee Public Museum, 6; the State Historical Museum at Madison, 13; the Logan Museum at Beloit, 9; the Oshkosh Public Museum, 3; the Neville Museum at Green Bay, 2; and in private collections, the Jos. Ringeisen collection, 27; the Olen collection at Oshkosh, 4; the Notz collection at Milwaukee, 1; the Schoewe collection at Milwaukee, 1; the Faville collection at Lake Mills, 1; and I have just heard of two more, making in all 69.

Slate birdstones are much more numerous than those made of porphyry or granite; about twenty of slate have been found to one of the harder materials. In my collection from Wisconsin there are, at present, 11 birdstones with eyes and 16 without eyes, 27 in all. Of these, 11 are of porphyry and granite, 1 of quartzite and 15 of slate. Of the specimens from other states, I have 15 with eyes and 17 without eyes. Of these, 14 are of porphyry and granite and 18 of slate, making in all 59 specimens. The relative large number of harder materials employed in these specimens is due to the special effort I have made in the last 25 years to

get specimens of porphyry or granite, because when you do get one of these, in nine cases out of ten it is a beauty (figure 6). The smaller circle on the map (figure 7) shows the territory in which the birdstone originated, including the southern half of Michigan and all of Ohio and Indiana, just

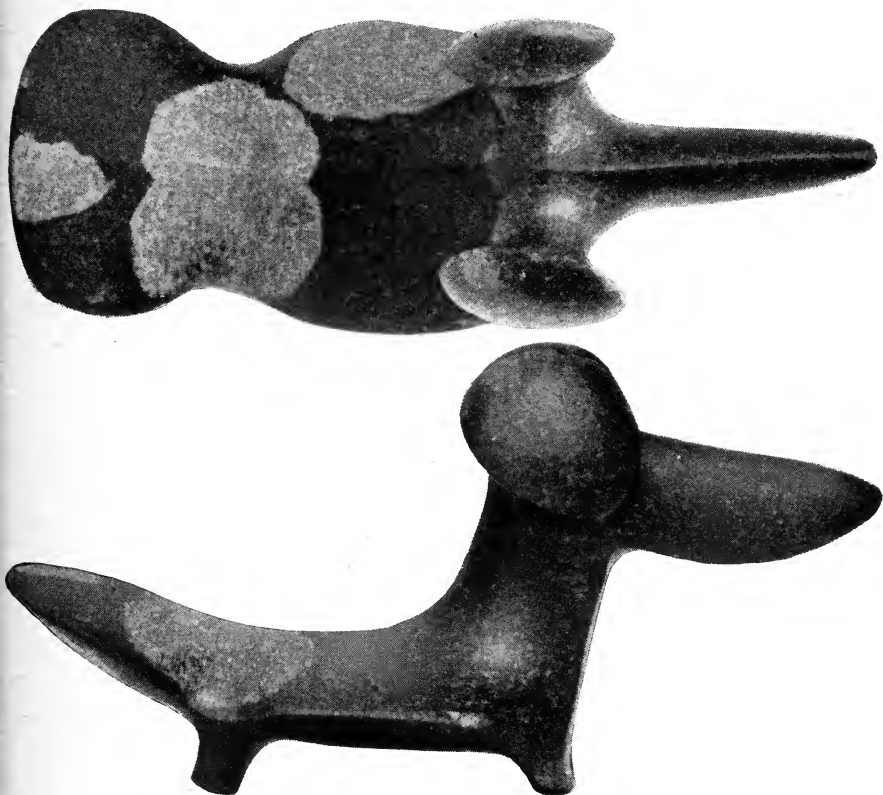


Fig. 6. Birdstone of porphyry, Ringeisen collection

as the fluted ax originated in Wisconsin, and the barbed ax in Michigan. The larger circle, which takes in parts of Illinois, Wisconsin, western New York and Pennsylvania, and that portion of Canada bordering on the Great Lakes, shows the territory in which birdstones have been found, but not so numerous as in the states of their origin, Michigan, Ohio and Indiana. I do not believe that a dozen specimens could be located which were actually found outside of this larger

circle. Having originated in the smaller circle, the fad, if we may so call it, spread east, west and north, probably due to tribal migrations. But why did it not spread to the south of the larger circle? It would seem more natural if the territory of their origin were in the center of the territory of birdstone distribution.

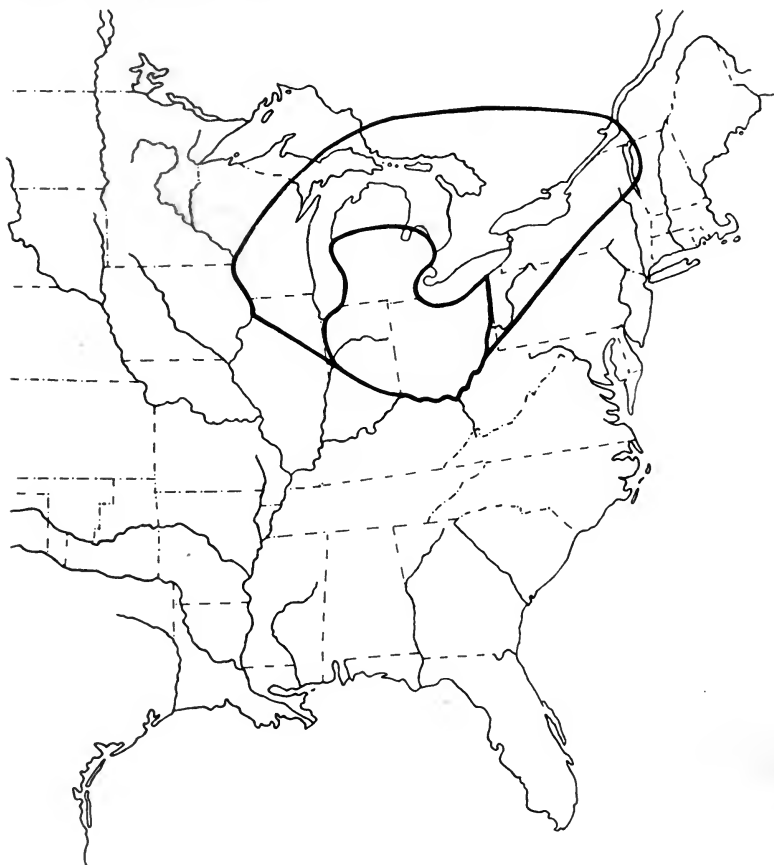


Fig. 7. Map of Eastern United States, showing strong center of birdstone distribution

We know that at the coming of the white man, the Indian stopped the making of stone ornaments and implements, due to the fact that he could, by the trading of furs, get ornaments of glass and metals, iron implements and guns which were far superior to his stone ornaments and implements and his bows and arrows, and not nearly as bulky.

He acquired these trade specimens just as fast as the white man could furnish them. To this fact, I attribute the scarcity of the birdstone, since I believe that it was first made or invented very near to the first arrival of the white man, when the manufacture of stone artifacts ceased. Otherwise, the birdstone, which is the most beautiful of all stone specimens the Indians made, would surely have spread to every tribe on the continent, just as in the case of gorgets, stone beads, boat stones and other ornaments whose designs are similar from one end of the country to the other.

I believe that another reason for their scarcity might be that they were probably worn by the chief or the medicine man, or used at the making of an important treaty to symbolize, as it were, the Dove of Peace.

Birdstones had a tendency to break at the neck, since that was the weakest part. If a break occurred while the object was still in use, it was not discarded, because of the large amount of labor required in its manufacture, and also because of the veneration in which it was held; so the broken surface was smoothed and the specimen continued in use. I have three of these broken and refinished specimens, known among the collectors as saddle stones. I have seen about one dozen of these saddle stones, which I am positive were originally birdstones.

In making my collection, I have had the assistance of Wm. Elkey, a traveling salesman, John Evans and Ed. Richter. The two first mentioned are now collecting relics in the Happy Hunting Ground. These men, who were well posted on Indian relics, would locate and buy these specimens for me. In case they could not purchase them, they would let me know where they were and I would try and pry them loose with a silver crow bar.

Because of their scarcity, very few birdstones found in Wisconsin have left the state. The first Wisconsin birdstones were found about thirty years ago, and when found were prized very highly by the finders because of their rare form and beauty. I know of very few instances of a birdstone having left Wisconsin through sale or removal. I have had the good fortune to get two of these back. One was of a beautiful mottled granite, with pop eyes, found at West Bend. It was sold to a collector at Houghton, Michigan. The

other, also of mottled granite, was found at Evansville, and was in the possession of the finder who moved to Nara Visa, New Mexico.

Recently the Milwaukee Journal pictured my birdstones, and a few days later I received a letter containing this picture from Chas. H. Roberts, a farmer at Glen Flora, Rusk Co., Wisconsin. The letter stated that he had found a stone just like the one he had marked with a cross on the picture. I tried to get him to send it to me but did not succeed, so on June 19, 1931, I started from Milwaukee for Glen Flora at 4 A. M. and arrived home again at 11:30 P. M. after motor-ing 585 miles in one day, with another pop-eyed birdstone made of quartzite in my pocket (figure 8).



Fig. 8. Newly discovered Wisconsin birdstone of quartzite

Mr. Roberts found this birdstone, in 1910, between the North and South forks of the Jump River, right at the junction, in Sec. 19, Kennan Township, Price County. He was at that time a timber cruiser employed by a lumber com-

pany in Kennan, and he and another cruiser by the name of Norton were sent out to estimate the timber south of Kennan along the North Fork of the Jump River. When they got down to the south fork of the river they found a clearing of about 10 acres between the two forks right at the junction. This greatly excited their curiosity as all the rest of the country around was in virgin timber. They crossed the north fork of the river to investigate and while looking around between the shrubs and young trees, which had started growing in the clearing, they found pieces of pottery and other refuse, and stone fire places, showing that it had been an Indian village site. In the center of this clearing there was a space about 100 feet in diameter where the vegetation was considerably lower than that surrounding it; even the ground was exposed in places. This was evidently where the dance circle-used to be. While Mr. Roberts was examining the places where the ground was exposed, he saw the head of the birdstone projecting out of the ground. Thinking it was an insect of some kind, he took a twig and worked the object loose from the earth. He then saw that it was a stone and picked it up. During all the years that he had possessed this specimen, he had never known what it was until he saw the picture of my birdstones. Curious to know what it was, he wrote a letter to the State Historical Museum several years ago, describing the birdstone and asking for information. He received a reply from our secretary, Chas. E. Brown, stating that the description was so vague that he could not decide and that Mr. Roberts should send it to Madison for identification, which Mr. Roberts refused to do. This was a lucky break for me.

The high prices paid for genuine birdstones have induced fakers to get to work and their products are to be found not only in private collections but also in public museums. These frauds are usually made of slate, modeled after genuine specimens and then artificially aged. Some of these are made so cleverly as to fool even a seasoned collector. For this reason, our society has appointed a fraud committee, consisting of collectors who have had years of experience in locating and tracking down fakers and putting them out of business by law. This committee is at the service of all col-

lectors and dealers and all doubtful specimens can be sent to Jos. Ringeisen, Jr., 1804 N. 3rd St., Milwaukee, Wisconsin, who is the chairman. They will be examined by this committee and an opinion will be rendered and promptly returned to the sender. Collectors are urged to report to the committee any fakers operating in their vicinity.

In conclusion, I wish to impress upon all collectors of Indian relics the importance of insisting on perfect data on all specimens they purchase, and, if such information is not available, of refusing to buy it, no matter how good a specimen it seems to be. Public museums and most of the larger private collectors will not buy a specimen unless it is accompanied by complete data which should include the following information: by whom was it found; if by a farmer, in what year and what season of the year, while plowing, cultivating or cutting grain; was it found on the surface or in a mound; with or without a burial; in what section, range, township, county and state was it found; any other information available. If the specimen has changed hands since the finding, get the names of the persons through whose hands it has passed before you secured it. In most cases it is easy to get this information when you buy the specimen and extremely hard in after years. A specimen with perfect data is a living thing, it talks and tells a story which, if compared with the story told by the data of relics of other collectors, will soon tell our scientific men of the roving and migrations of the different tribes, and also handicap the faker of prehistoric relics. Following this advice, the amateur collector will soon build up a valuable and saleable collection and not a graveyard of prehistoric Indian relics. A specimen without complete data is looked upon with suspicion and is hard to sell should disposal become necessary.

"OLD KENTUCKY"

T. M. N. Lewis

From the archaeologist's point of view the epithet "old" is most appropriate. From every other angle the state now warrants the name of "New Kentucky", for new roads, fine schools, and many other indications of progress are manifest.

It is naturally to be expected that a part of the country where such large rivers as the Mississippi, Ohio, Tennessee, and Cumberland are all but a stone's throw from one another, would abound in archaeological remains. And so it does.

At the invitation of Mr. Fain King of Paducah, Dr. Walter B. Jones, Director of the Alabama Museum of Natural History, his three assistants, and the writer convened in that city during last September for the purpose of making a survey of western Kentucky.

Mr. King, in his modest manner, had previously advised the writer that he probably possessed the largest collection of American Indian artifacts in the state of Kentucky. Since viewing this collection, Dr. Jones and the writer are in accord in our belief that this is the largest private assembly of flint specimens in existence. There are nearly two hundred excellent flint spades ranging in length from twelve inches to eighteen inches and nearly one hundred notched hoes of superior workmanship. Furthermore, there are hundreds of other artifacts of the most unusual types, consisting of banner stones of rose quartz, objects of fluorite, an inscribed slate tablet, stone effigies, a double-headed, pop-eyed birdstone, discoidals and pipes by the dozen, and numerous pottery vessels, chiefly of the effigy type.

The bulk of the material was gathered from western Kentucky, western Tennessee and the extreme southern portion of Illinois. Although Mr. King is a very busy man, being identified with numerous enterprises, his great interest in archaeology and kindly disposition towards others similarly interested, prompts him to close up shop the moment there is an opportunity to converse with another who is either vo-

cationally or avocationally interested in the subject. The writer has been asked to urge all who are thus interested to avail themselves of his good nature whenever they may have an opportunity to visit the city of Paducah, the "Gateway to the South".

Under the guidance of Mr. King and Mr. Phil Porter of Clinton, Kentucky, we were given an alluring opportunity to examine numerous large mounds in western Kentucky and western Tennessee. For the most part they were the round, truncated type ranging in diameter from 100 feet to 250 feet, and usually quite precipitous except in one direction. Whether this gradual incline in one direction was an original feature of the mounds or due to subsequent erosion by rains was not determined. A short trench dug to the depth of three feet in the top of one mound, which was 35 feet in height, revealed no evidence of habitation. What appeared to be the remains of right and left human femurs were encountered at the bottom of the trench. These femurs were so thoroughly disintegrated and absorbed by the surrounding soil that barely enough ash remained to fill the palm of one hand. An ounce or two of red ocher paint was associated with this skeletal material.

The mounds varied in height from 20 feet to 40 feet. It is supposed that the flat tops were used for habitation, as most of them are located in the bottom lands which are inundated in the spring of the year.

Near Barlow, Kentucky, on the bank of the Ohio River opposite Moundville, Illinois, we excavated a camp site in a cornfield. Many surface finds had been made on this site and it was abundantly covered with potsherds. The surface sherds were of a quality inferior to those found several feet below the surface. The texture of the clay and the higher degree of polish seemed to indicate that the culture of the last aborigines to inhabit that site was subordinate to that of their ancestors, a situation which is encountered generally throughout the country where habitation has been of long standing.

Many of the sherds found three or four feet below the surface were portions of extremely shallow dishes, quite similar in size and depth to our modern dinner plates. These were

black in color, very hard and highly glazed. Portions of effigy pottery were encountered, such as a human forearm and hand with the fingers clenched, a deer head, a duck head, and several problematical forms. Numerous antler flaking tools, bone awls, and needles were found. The most interesting of the bone specimens was an awl fashioned from the leg bone of a wild turkey, having inserted in the cartilage sheath on the concave side, a round, slender needle a millimeter in diameter. This was found four feet below the surface.

In Hickman County, Kentucky, a prehistoric canal three miles in length was pointed out to us by Mr. Phil Porter. Although we did not traverse the length of this canal, Mr. Porter stated that it was as straight as if it had been surveyed with modern instruments. It meets a wide creek at right angles at one end and a burial ground at the other. At the creek there are evidences of an extensive camp site and several very large tumuli. From the burial ground at the head of the canal Mr. Porter has recovered over one hundred and eighty clay vessels, many of which are of the effigy type, the owl face predominating.

The ceramic art in this region seems to have been developed to a high degree. The effigy pieces in particular are not only of great interest to the layman, but are also most interpretive from an archaeological standpoint. Plans are being laid to investigate this canal and burial ground further during the coming April, and the writer hopes to have something of considerable interest to report subsequent to the proposed investigation.

THE GENEVA LAKE CENTENNIAL

Paul B. Jenkins

As many of you know, the Geneva Lake region—including the three lakes, Delavan, Geneva, and little Lake Como—is especially rich in historical associations of three periods. These are of course the Indian era; the pioneer period; and the later developments of an intensive agriculture, a notable social life and status, the accession and influence of the great Yerkes Astronomical Observatory of the University of Chicago, a considerable development and modernization of the communities on the lakeshores, and, finally—for this is also, I suppose, an historic, even if a present-day, feature—the growth of a summer-resort and tourist Mecca which brings to the region a three-months' summer-time population from ten to twenty times as numerous as its residents for the remainder of the year. Of this social and economic aspect I shall not speak further than to remark that you may imagine the problems of traffic, accomodation, control, business, sanitation, morale and the like, that such an annual cycle brings in its train.

In naming the periods of the past of which evidences are found in the Lake Country, I ought perhaps to have mentioned that strange, mysterious, and, alas, so little-known age, the far pre-historic epoch extending from the post-glacial day of the mastodon through the unknown centuries of habitation by the people known—first by popular fancy but now by Dr. Shetrone's scientific classification—as the "Mound-Builders." Of such habitants, both faunal and human, the region does not lack for traces as fascinating as they are baffling. Mastodon remains have been found at half a dozen points around Lake Geneva alone. Mounds, both burial and empty, are known—and others have been most unfortunately obliterated—a total of probably between one and two hundred; at least two large bird and one turtle effigy mounds are known to have been among those destroyed by the ruthless plow of the pioneer. Excavations of these by methods formerly rude and careless, today happily careful and scientific, have disclosed numerous burials, obviously of dateless antiquity.

Coming to the historic period—and, it should be added, to the period immediately prior thereto, of which we have no little knowledge, thanks to recovered Indian legends and traditions—the Geneva Lake neighborhood is peculiarly fortunate in the lateness of the date, now but a few months over a century, at which it was invaded by the westward tide of pioneer settlement. While the Green Bay region has been known for now almost three centuries; the vicinity of Milwaukee possessing at least some records extending back to the time of the American Revolution; our lakes were unseen by the white man's eye and their shores untrodden by the white man's foot until as late as the month of May, 1831. In consequence, a Stone Age culture, as far as represented by the Potawatomi people, persisted—only slightly affected by the white man's proximity, his ways, his goods, and alas, his "fire-water"—until the removal of the red man in September, 1836, in accordance with the terms of the treaty of the great Council of Chicago of 1833.

It is of course unnecessary for me to explain that this late isolation—so happy for the archaeologist and the historian—of our region from intimate contact with the white man and his inevitable erasures of the evidences of the past, was due to the absence of direct access by water, such as led to the far earlier arrival of the explorer, trader, soldier, missionary and settler at all points of the territory of Wisconsin readily reachable by canoe and bateau, as along Lake Michigan, the Fox, the Wisconsin, the Mississippi, and the tributaries of these waters. The Potawatomi of our neighborhood had of course their trails, without doubt centuries old, reaching east and west and north and south, and by means of these they were accustomed to travel to trade with the earliest posts or forts at Milwaukee, Chicago, and probably northward to Fort Howard at Green Bay, Fort Winnebago at Portage, and Fort Crawford at Prairie du Chien. From these points of contact with the white man's world they were able, however, to retire to their native fastnesses and to a culture but little altered from its origins among the Algonkins of the eastern states, their aboriginal ancestors. Notable among such retreats were the villages of bark and reed-mat dome lodges on the shores of what they knew as "Maung-zet Ne-biss," or "Big-Foot Lake," from the popular

nickname for the local chief, "Maung-zet," or "Big-Foot." This nickname was bestowed, by the way, so recovered Potawatomi traditions definitely tell us, by the chief's brother-in-law, and alluded to the size of his foot-prints in the snow covering the frozen surface of the principal bay (now Williams Bay), as he was carrying home the frozen carcass of a deer which he found in the ice where it had been killed, along the eastern shore of the bay, by the wolves that swarmed in the neighborhood. This Potawatomi name for the lake the first French traders translated, of course, as "Gros-Pié," and the English or Americans as "Big-Foot Lake," by which names it was known until its christening by the first Government surveyor, John Brink, in 1836, as "Lake Geneva;" a name arbitrarily but successfully bestowed by him from its resemblance to the surroundings of his earlier residence at Geneva, New York State, on the upper end of Seneca Lake.

Not to dwell longer in the Indian period—much as we could wish that we might do so in reality—let me abbreviate the story by commenting that the first recorded sight of Geneva Lake by any of the white race was on the occasion of the arrival at its west end of the historic and famous "Kinzie party," in the last week of the month of May, 1831. This party consisted of John H. Kinzie, a son of the famous trader beside old Fort Dearborn at the mouth of the Chicago River, his bride of a few months, his mother, a sister-in-law and her little boy, two French voyageurs or coureurs des bois, a negro boy and a half-breed French-and-Indian girl, Mrs. Kinzie's maid. John H. Kinzie was the Government Indian sub-agent at Fort Winnebago, now Portage, and had been on a visit to his parents at Chicago. With his bride he had travelled to Chicago on horseback over a trail leading to "Dixon's Ferry" (now Dixon, Illinois) on the Rock River, and thence to Chicago. Returning, finding that a body of troops was to be transferred from Fort Dearborn to Fort Howard at Green Bay, and that these were to follow the known but untravelled Indian trail via "Big-Foot Lake," the party elected to accompany (actually, as it happened, most of the way to precede) the soldiers. The party travelled in the saddle—two of the men and two of the women—and in what was then called a "Dearborn wagon" (very like the later "democrat buggy"), the first vehicle of its kind ever

seen in the region, and which gave them trouble enough to get it through the woods and along the ancient, narrow single-file Indian trail which they followed. I will not further distract you with the story of the party—so curiously and almost symbolically composed of representatives of the white, the black, and the red races—their trip, and the occasion of their reaching the lake, other than to comment that, thanks to young Mrs. Kinzie's mentality and her facility alike with pen and pencil, we possess a full and absorbingly interesting account of the journey and especially of their arrival at Chief Big-Foot's village on the western shore, on the site of the present thriving and popular summer-resort village of Fontana. Nor have we only her description of the historic occasion, but we have also her drawing of the appearance of the lake as seen from the point—readily identifiable today—where the trail emerged from the woods and came out upon the edge of a bluff on the southwestern shore. How many places in all America can boast of a full description of the first arrival of the whites at the historic site and also of a picture drawn at the time of its appearance on the historic day! True, our mutual friend and eminent historian, Mr. Milo M. Quaife, so long himself of Wisconsin and of this Society, remarks of Mrs. Kinzie's narrative that it has all the reliability of the tales of the late Baron Munchausen! Yet despite a certain literary embroidering bestowed upon it by the fair authoress, we can still check it so thoroughly that we can tell quite definitely how much of it may be fiction and how much is indisputable fact.

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But now to come—after so prolix, but, I think you will admit, not uninteresting a preface—to the connection of all this with the recent Centennial of, to us at least, so notable an event.

The very point is that much of this that I have had the pleasure of recounting thus far, was almost unknown—existing only in diverse and scattered records nowhere gathered together, all of it almost unscrutinized by the historian—up to a date only about ten years ago. Almost no attention whatever had been given to it by local residents, though

much of it was of record in Mrs. Kinzie's narrative or scattered through the many volumes of publications of the State Historical Society. An interested elderly resident of Lake Geneva had compiled, now thirty-four years ago, a small book of local records and reminiscences, not a little of it of real value but much of it also of that amateurish and unverified nature with which we are all familiar in the usual tales of "oldest inhabitants" and the like. For instance, he misstated the year of the arrival of the Kinzie party, and his error has passed into local acceptance, necessitating no small labor to undo the popular misinformation. Excellent but unrecorded or even unknown records of early comers to the region had not come to light; and the Indian sources of information had been wholly ignored.

In December of 1922 the University of Chicago Press published "The Book of Lake Geneva," known possibly to some of you; a work the result of forty years' acquaintance with the region, many years of study of scattered records, and a year of intensive compilation. Despite defects (as none know better than the writer) largely due to insufficient information available at the time, much of which has been corrected by later researches, its publication had the fortunate result of arousing for the first time a widespread and enthusiastic interest in the history of the Lake Country. The continuous growth of this interest developed, four and a half years later, in several notable forward steps in the summer and fall of 1927. These were (1st) the marking, by local, large glacial boulders and bronze tablets, of the known sites of Indian residence and history; (2nd) the conduct of a thorough study of the Lakes Geneva and Como area by Mr. Charles E. Brown of the State Historical Museum, assisted by Mr. Theodore T. Brown, now Director of the Nivelles Historical Museum at Green Bay; (3rd) a trip to visit the Potawatomi of Forest County in an endeavor to recover traditional and legendary information about the period of Potawatomi residence on Geneva, an expedition productive of an unanticipated wealth of data, place-names, local customs, and the like. This trip was made by Mr. Brown, Mr. Theodore Brown, the writer and Mrs. Jenkins, and has proved to be, perhaps, the most valuable single effort in the Society's history; resulting, as it has, in not only the recovery of

much priceless information concerning details of the Potawatomi period, which in a few years would, through the death of the elders of the tribe, have been lost forever; but it brought about also an intimacy of touch between the Society and many of the present Potawatomi descendants of those living on the lake in the long-ago, which we hope to maintain; (4th) The material thus accumulating and the opportunities and demands which it presented led to the organization of the Geneva Lake Historical Society on September 23rd, 1927, and (5th) the results of these studies were published in the Wisconsin Archaeologist for April, 1928. A second edition of this material was issued by the Society in booklet-form in 1929 in response to popular demand, and still a third in December, 1930, with the addition of a resumé of the Indian and pioneer history of the Lake country. I may comment that a fourth fuller and up-to-date publication is now in contemplation by the Society, and will probably be available by the summer of 1932.

On Memorial Day, 1929, the Society dedicated a boulder-and-tablet marker on the site of the grave of one of the wives of Chief Big-Foot, the site of the grave being on one of the residence-streets of the village of Williams Bay. As a feature of this occasion the Society had as its guest the late venerable Chief Simon Oh-ne-gas-sum (or O-nan-guis-se) Kah-qu-a-dos, who became a firm friend of ours for the remainder of his long and worthy life.

There should be mentioned also the fact that the interest and generosity of Mr. Simeon B. Chapin of New York city, who has a summer home on the lake and is himself a native of Milwaukee, have done much to make possible the Society's spirit and work, throughout its history.

All this interest could not but lead to a wide-spread feeling that the next work of the Society must take the form of an adequate observance of the hundredth anniversary of the discovery of the lake by the whites, the mentioned historic and famous "Kinzie party" on May, 1831. The first steps were taken by the appointment, in October, 1930, of a Centennial Committee to whom the work was entrusted. This committee met almost weekly for the next six months, then transferred its trust to a larger group of forty members from the communities of the Lake country, with an Execu-

tive Committee of a dozen, among whom may be named the following:—

Mr. S. B. Chapin of New York; Dr. Otto L. Schmidt of Chicago, President of the Illinois Historical Society; Mr. L. E. Myers, President of the Chicago Board of Education; Col. Wm. Nelson Pelouze of Chicago; Mr. Wm. J. Wrigley, Jr., of Chicago; Mr. Robert Tarrant, Chicago; Prof. George Van Biesbroeck of the Yerkes Astronomical Observatory; Mr. Blake B. Bell of Harvard, Illinois, President of the Big-Foot Country Club; and Messrs. S. P. Taggart, L. G. Buckles and J. S. Hotton, mayors or presidents, respectively, of their local communities, Lake Geneva, Fontana, and Williams Bay.

This committee made the late Mr. Wm. S. Perrigo of Beloit its chairman, and Mr. J. S. Hotton of Williams Bay the Centennial Manager. It needs no comment to remind you that this year was no period of financial ease!—yet the surprising result followed, that all needed funds for the project were promptly forthcoming, alike from individuals and from the communities and clubs around the lake, and at the close of the Centennial all bills were paid and a substantial sum remained over, to be presented to the treasury of the Society!

From the first, a two-days' program was contemplated, divided into opening exercises (on the afternoon of Friday, June 26th) at which Governor La Follette was invited to speak; a night-time illuminated marine parade of all the water-craft of the lake, followed by a fireworks exhibition in the harbor at Lake Geneva; on the next morning the opening of a Centennial Historical Exhibit of relics of the Indian and pioneer periods at Williams Bay; and that afternoon a historical pageant re-enacting the coming of the Kinzie party, on the exact site of their arrival on the west shore, this site being the notable beach and residential area of the village of Fontana. For the greater convenience of many concerned, especially school-children, summer residents and visitors, the date was shifted from the last week in May to June 26th and 27th.

All this was successfully carried out, with the single exception that the Governor was at the last moment unable to attend. The music accompanying the opening exercises was furnished by a band of 300 pieces and a chorus of over 200

voices, all drawn from the public schools of Walworth County, by whom the music had been rehearsed for several months.

Thanks to the experienced command of Col. Wm. Nelson Pelouze of Chicago, ex-commodore of the Lake Geneva Yacht Club, and of the present commodore, Mr. Ernest Schmidt of Chicago, the afternoon and evening events of the first day, culminating in the marine parade and fire-works, drew a crowd of visitors and spectators such as the whole region had never seen before and whose numbers indeed all but appalled the city of Lake Geneva, for not less than 20,000 persons crowded the lake-shore to witness the spectacle!

At the opening of the Centennial Historical Exhibit in the public library at Williams Bay the next morning, Dr. Louise Kellogg of the State Historical Society made the opening address. There was presented Miss Fay Brink, daughter of the Government surveyor who first surveyed and named the lake ninety-four years before; and Prof. Alonzo K. Pond, late of the Department of Anthropology of Beloit College, gave an exhibition of the Indian methods of manufacture of flint arrow and spear heads and other implements. The material collected for this Historical Exhibit certainly surprised not only the thousand visitors but even those responsible for its display; for, while gathered almost wholly from the Lake neighborhood, we presently found ourselves compelled to insure it in the sum of \$10,000.00 against theft and fire, to have it guarded day and night for the ten days of its display, and to have guides and custodians constantly on hand to answer the endless questions of the interested public.

The pageant re-enacting the coming of the Kinzie party of 1831, held on the lake-shore at Fontana was not only brilliantly carried out—largely thanks to the labors and taste of Mrs. Robert Tarrant of Chicago, formerly of Milwaukee—but the numbers attending its scenes were an unanticipated embarrassment to all concerned! It was impossible to count them, but when I tell you that 3,000 automobiles were parked in the streets of a village of hardly more than 300 inhabitants, you can imagine the crowd! Probably some 12,000 persons witnessed the pageant—or as much of it as any of them could see! Most fortunately, owing to the interest and personal direction of Mr. Harley Clark, President of the Fox

Film Company, full "sound movies" of the entire pageant were taken; to be preserved, we earnestly hope, in the archives of the Society for the interested study of generations to come.

An unexpectedly successful feature was the installation in a tall tree on the lake-shore of a replica of a Potawatomi "tree-burial" which is known to have been placed near-by during the period of the Indian village there. Placed in a genuine hollowed-out log dug-out Potawatomi canoe recently recovered from the lake, very much as the original is known to have been, this novelty proved so fascinating to the visiting public that, the night before the pageant, vandals or thieves climbed the tree and robbed the log coffin of its contents, with which they escaped! To this day we have no idea as to whether they were mere vandals, or "racketeers" fancying that they were securing a possibly valuable Indians remains and skeleton! Their deed certainly set a lot of us furiously at work the next morning, making a new "dead Indian" and installing him in the tree before the pageant began!

You would not thank me to try to describe in any detail the scenes enacted; beyond noting that there were brilliantly impersonated the Kinzie party of 1831, all correctly garbed, equipped, mounted and armed; the interesting and dramatic incident of the "unknown French trader" who is known to have visited the lake prior to 1836; John Brink, the Government surveyor, whose impersonator carried the original instrument with which the work was done; the illiterate first frontiersman and Indian-fighter, Christy Payne; Rev. A. S. Dwinnel, the first missionary of the region; and the first "covered wagon" of incoming settlers.

Impersonating their own ancestors of Chief Big-Foot's village we had thirty-two Potawatomi men, women, and children from Forest County in northern Wisconsin, actual "woods Indians" and no theatricalized or even modernized red men. Some spoke little or no English; all wore their best tribal regalia—one wore little else than his leggings, beads, head-dress, and his beloved insignia, a white swan's wing. They built their own domed lodges, of material brought with them from northern Wisconsin, and all certainly had "the time of their lives" during their stay. Three chiefs were

among them, Wampum, Shawano, and Tecumseh, the last a great-grandson of the original chieftain of that name, himself a Shawnee, killed at the battle of the Thames in 1813. Accompanied by their former Government agent, Mr. Henry Ritchie of Laona, himself a half-breed—"Me-soh-quod" as is his Indian name—we were able with his aid to add to our Society's records translations of the phraseology of both the Potawatomi "Adoption Ceremony" and of the traditional prayers used in their re-enacting of the aboriginal custom of praying beside the "Seven Sacred Springs" which have been preserved and beautified on the magnificent grounds of the near-by Big-Foot Country Club.

Let me add a word about these springs: perhaps the most remarkable site of all the Geneva Lake region. In accordance with the familiar Indian conception of "water-spirits" as inhabiting bodies of water everywhere, and conceived of as possessing powers for weal or woe over mankind, the unusual conjunction of seven spring-fed pools, close together and naturally arranged in descending steps on a beautiful slope near the lake, were long ago seized upon by the original Potawatomi of the region—quite possibly also by their predecessors of the so-called "Mound Builders"—as thus inhabited. Here it was their long-established custom to come to pray on every important event of either chase or warfare. To this spot we even know that, years after their removal in 1836, representatives of the local group were accustomed to return, here to re-enact the primitive rites of their forefathers. This most touching observance of primitive religion has now been enacted twice in the presence of members of our Society; once by the late Chief Kah-quados in June, 1929; and by these our visiting Potawatomi who participated in the Centennial. Of this intensely interesting primitive rite we now have both photographs and translations of the prayer spoken on the occasion.

The scene of this incident has been marked by the officers of the Big-Foot Country Club with a huge boulder marker and a beautiful bronze tablet describing the ancient significance of the spot and commemorating the Centennial and the performance here of their ancient worship.

Finally, let me say that every bit of all the work of preparation and execution was (of course with the exception of

the Indian participation) done by local talent, generosity, interest and taste. No charge was made for any part of the occasion whatever. No one was injured despite the unprecedented throngs attending. We believe that the work of the Society was, in the language of the street, "put on the map" of Wisconsin in a degree that leaves the Society both deeply gratified and thrillingly incited to finer things yet to be accomplished.

THE EDUCATIONAL OBJECTIVE AND BUSINESS SIDE OF THE GENEVA LAKE CENTENNIAL CELEBRATION

J. Sidney Hotton

The object of this celebration was distinctly educational, not commercial; to review the progress of a century, not to bring a lot of people to town to spend money and have a grand whoopee. The people came in large numbers, but they came to see and to compare and contrast things as they were a hundred years ago with things as they are now.

The Potawatomi Indians were there, living in tepees and wigwams made of bark and skins stretched over poles in the ground as their ancestors lived when the whites first saw Lake Geneva in 1831. They cooked their meals in a kettle hung over the camp fire. They made their baskets, their moccasins, and their bows and arrows. They sang their songs, beat their tom-toms, whirled through their ecstatic dances, sprinkled their incense upon the moving waters and offered up their worship to the invisible spirits as in the days when Mrs. John Kinzie and her husband made friends with their great grandfathers and grandmothers on these same Lake Geneva shores.

The covered wagon was reproduced and the frontiersman faithfully impersonated in what we called the Historical or Kinzie Pageant. There was perhaps no contrast between the early days and these present times more engaging than the slow moving canvas-covered wagon lumbering along the ground and the high-powered air ship speeding over head at more than 100 miles an hour.

An outstanding educational feature was the historical exhibit. Relics of the Indian days and of the pioneer days were there in abundance. They told a thrilling story of early fashions in dress and early methods of work.

One circumstance that greatly enhanced the educational value of the celebration was the deep interest of the County Superintendent of Schools, Miss Maud Mitchell. Months before the event, she began to talk and write about the value of the celebration. She encouraged her teachers and many of the pupils to read Waubun and other books on the history

of the county and the Geneva Lake region. She arranged for the great high school girls' chorus, and the high school band of 200 instruments. In fact the work she did brought home the significance of the centennial to nearly every household in the county.

The educational objective of the program might be summed up thus: The century of progress now ended is a pledge of another century of progress now beginning. The progress of the century past was due to the enterprise and industry of the boys and girls of that century. It is up to the boys and girls of the next century to make good.

The Financing

An experienced money-raiser once said to the writer, "Do your work well and your money will be raised before you ask for it." So well conceived was the Geneva Lake Centennial by its originator, Dr. Jenkins, and so well was its plan and purpose worked out by the sponsoring committee that the financing presented very little difficulty.

There were three main steps in the financing plan of the Executive Committee.

1. The preparation of a budget assigning to each phase of the program a definite amount of money.

2. The communities chiefly concerned were each assigned a quota and each appointed a local committee to raise it.

3. Each local committee solicited and collected its own money and turned it in to the general treasurer.

The total budget estimate was	\$3500.00
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The total expenditure was	\$3204.00
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The total amount raised by subscription was	\$3887.00
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Leaving a surplus of	\$ 683.00
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Out of this surplus the executive committee awarded certain honorariums to people who had worked hard without thought of compensation—the leader of the high school band, and the chorus director, for example. These gifts amounted to \$425.00. When these were paid there remained a balance of \$258.00 which was turned over to the Geneva Lake Historical Society. We might have done better financially if the Kinzies had not elected to visit Geneva Lake just one hundred years ahead of one of the worst financial depressions the world has ever known.

ARCHAEOLOGICAL SURVEYS ³⁴

Carl E. Guthe ³⁵

An archaeological survey is the logical first step in a study of the earlier civilizations of any region. Just as a business firm planning to invest funds in a corporation would make a survey of its assets and potentialities, so a research organization expecting to invest time and money in a study of the pre-history of a region should first devote its energies to an inventory of the archaeological assets and potentialities of the area under consideration.

In assembling data for the survey, it is advisable to concentrate upon such materials as may be obtained without excavation. There are two reasons for postponing intensive excavational activities. The first is that a satisfactory piece of work requires considerable time and a large amount of money. If the general archaeological problems involved are not understood, it is probable that both time and money will be wasted in investigating sites which have no scientific significance. The second reason for delaying excavation is that such work should be done by individuals who have been trained in interpreting the several kinds of evidence secured by exposing objects and by determining the relationships which they bear to one another and to the deposits in which they occur.

The sources from which the data for an archaeological survey may be drawn are books and manuscripts, private collections, and original research.

An almost unbelievable amount of information may be secured from libraries. The personal, popular, or scientific reports of journeys by individuals in a region during the early days of European occupation, while the native Americans still occupied the land, contain valuable details concerning the ways in which the Indians used the land and customs and habits which may have a direct bearing upon the interpretation of evidence found in deposits. Following the days of the

³⁴ A reprint from *The Colorado Magazine* (July, 1931), published by the State Historical Society of Colorado.

³⁵ Dr. Guthe is Director of the Museum of Anthropology of the University of Michigan and is Chairman of the Committee on State Archaeological Surveys of the National Research Council.

pioneers and settlers, the Government sent representatives into the various parts of the country to make scientific explorations and to survey the land according to the custom of the European. These men, trained in accurate observation and in various forms of engineering, placed in their official records information concerning trails, village sites, and ruins which they encountered. In many states these early governmental records may be found in manuscript form in the state and county archives. Finally, there are the more recent professional archaeological publications dealing with the records of the immediate region under consideration and related areas, which must be studied and abstracted in order to afford the individuals conducting the survey a basic knowledge of the problems involved with the least amount of expense. A study of these scientific publications is analogous to the training received in school by means of which experiences may be secured vicariously.

The second major source of information for use in an archaeological survey is the group of private collections within the district. In practically every county in our country, it is possible to find one or more individuals who are interested in what is known as "Indian curios." Unfortunately, some of these collectors do not have materials which are of value historically, although they may have an emotional value to the owner, or a commercial value to that group of persons who buy and sell such objects. In order that these collections may have historical significance, it is necessary that each object have with it a record showing where, when, and by whom it was collected, and the conditions under which it was secured. Some collectors have supplemented the materials obtained in their vicinity with objects of doubtful historic value from other regions. To the archaeologist only the specimens actually found by the collector himself can have any historical significance. The owners of such collections, through a life-long, intimate acquaintance with the immediate region surrounding their homes, are better equipped than anyone else to study the Indian records of that vicinity. Each of them can render a unique service to the history of our country by gathering and properly recording the data concerning the remains of the Indian occupation of his neighborhood.

The third source of evidence for use in an archaeological survey is the field work itself. The primary purpose of a field reconnaissance is to secure accurate information regarding the Indian remains in such a way that a future review of the assets of the region will be unnecessary. A knowledge of the kind of information required and of the probable types of evidence to be expected is an essential part of the equipment of the man doing such field work. Unless a trained man can be obtained, this aspect of the survey should not be undertaken without the guidance of experienced individuals in other organizations. In addition to this technical knowledge, the individual in charge of the reconnaissance should be able to make acquaintances easily and keep on good terms with the people living in the region which he studies.

The field reconnaissance may take one of several forms, depending partly upon the kind of country in which the work is done, and upon the organization sponsoring the survey. Sometimes a house-to-house canvass will reveal practically all of the Indian sites of the region. Again, a contact with local enthusiasts or a single individual who is well-known in a county or smaller division of the area may make possible a saving of time and effort. Or it may prove advisable to run survey lines much in the way civil engineers do. In the less inhabited regions, following river courses and other natural routes of travel may result in the discovery of most of the Indian localities.

It is not sufficient merely to secure the various kinds of data obtainable from these three sources. Some provision must be made correlating the information and for analyzing it according to different criteria, many of them statistical. The survey must be administered by an organization, preferably already in existence, the personnel of which is sufficiently interested in the archaeology of the region to give to the survey the necessary facilities for its advancement. In various parts of the country, state departments of education, conservation, or history; universities; museums; and occasionally privately organized groups have undertaken such a survey. The facilities needed for the co-ordination of the data are an office force and technical staff equipped to handle correspondence; to create a system of records which

makes possible the filing of information in available form; and to arrange archaeological specimens systematically, thereby creating confidence in the survey on the part of individuals interested in what it is doing. By means of compilations in the form of statistics, groups of materials and data, and carefully prepared charts showing distribution of various characters, the interpretation of the many kinds of information received from the three major sources may be demonstrated.

Such a survey cannot be completed within a few weeks or months. The State Historical Society of Iowa spent seven years upon the preliminary survey of that state. The University of Michigan is publishing, after nine years of investigation, an archaeological atlas of Michigan. It is essential that the plan of procedure of an archaeological survey be considered carefully, and that definite arrangements regarding personnel and financial support be made to care for the work over a number of years.

The promotion of an archaeological survey is not a purely theoretical matter, since such enterprises are being carried forward by a variety of organizations in seventeen states of the union. Some of them are just beginning, others are already well under way, and Michigan, New York, and Ohio have published atlases.

REPORT OF THE STATE ARCHEOLOGICAL SURVEY COMMITTEE FOR THE SEASON OF 1931

T. L. Miller, Chairman

An appeal for assistance in carrying on the surface survey of the State was sent out and published in the April issue of this bulletin. The following reports were received and are submitted herewith.

Messrs. Walter Dunsmoor of Markesan and George L. Pasco of Ripon have been conducting a very recent survey of several groups of mounds in Marquette and Green Lake counties. This is an attempt to finish surveys for the counties named. A full report and maps are expected to be ready soon.

Survey expedition of the Milwaukee Public Museum, by Towne L. Miller. With the main body of the Department of Anthropology, under the direction of Mr. W. C. McKern, excavating the extensive group of mounds on the Clarence Raisbeck farm in section 5, Waterloo township, Grant County, during the months of June and July, it was thought best to make, at the same time, as much of a surface survey of that county as possible.

Two short trips into Grant County that had been made during the summer of 1930 enabled the writer to become acquainted with the lay of the land. The well-known collector, Mr. Ernest Bright of Prairie du Chien, accompanied one of the trips and it was through him that we met the enthusiastic collector and ardent amateur archeologist, Mr. George Foehringer of Cassville. Because Cassville is centrally located along the Mississippi River front of the county, it was thought best to locate there for the summer.

On June first, I and an assistant, Kenneth Drugan of Trempealeau, Wisconsin, who was with me last year, rented a room from Mr. George Foehringer who, with his wife, made our stay most pleasant and profitable. In every instance we found everyone friendly and anxious to help and inform us in every way.

As a preliminary to the survey, a note book had been compiled of all the archeological information that could be ob-

tained regarding Grant County. Previous work has been contributed by: Messrs. Charles E. Brown and Albert O. Barton, whose survey of part of the county was made in August, 1911, and published in the Wisconsin Archeologist Vol. 15, No. 4.; Moses Strong, published in the Smithsonian Reports, 1876; and Cyrus Thomas, whose survey is published in the 12th Annual Report, Bureau of American Ethnology. These data were arranged according to townships and sections so as to avoid repetition.

With the aid of the camera and enlarger, prints were made of the government topographical maps on a more readable scale and these, with county atlases, proved very useful, for in most of Grant County the roads follow the ridges and valleys and this renders it very difficult to find one's way about.

Many thanks are due to the county authorities for their many and well kept roads, for with camera and heavy plane tables a car is necessary and good roads are appreciated in wet weather.

Wherever possible, if the mound grouping was at all complicated, the plane table and stadia rod were used, but when the mounds were placed in rows along the ridges, as was often the case, it was found that a tapeline and prismatic compass were just as accurate and much easier to carry.

Beetown Township: Section 2, N. $\frac{1}{2}$ of S. W. $\frac{1}{4}$, 2 bird effigy mounds, five miles west of Lancaster, near the juncture of the Little Grant and Grant rivers. Previously reported as seven miles west of Lancaster. Surveyed with tapeline and prismatic compass.

Section 34, W. $\frac{1}{2}$ of N. E. $\frac{1}{4}$, group of 2 bird effigy, 2 linear and 4 conical mounds; surveyed with tapeline and prismatic compass. There is reason to believe that this group formerly extended through a cultivated field, but this portion of the group has been obliterated.

Section 35, R. 5 W., Rattle-snake Creek group of 13 conical mounds, on the George Clauer place, near the bridge crossing the creek on the Cassville-Beetown road. Surveyed with tapeline and prismatic compass. There are said to be some more mounds near by but they could not be located.

Blomington Township: Sections 27 and 28, August Plondke Group I., consisting of 8 conical mounds; Group II., con-

sisting of 7 large conical mounds on the high bluff east of the house; Group III., consisting of 4 conical mounds south of the "Elephant Mound." The above were all surveyed with tape-line and prismatic compass. Group IV., a group of 8 linear and conical mounds, locally known as a fort, on a small flat top of a hill just east of the house and near the road to Bagley. These were surveyed with the plane table.

Mecum and Patch group of mounds on the flats near the C. B. & Q. R. R., consisting of 21 conical mounds, four of which are connected with a linear mound, and a group of four large linears.

Evidences of camp sites on all of the flats on and around the farm. Some Hopewell-type potsherds were found.

In front of the August Plondke house and east of the C. B. & Q. R.R. is the "Elephant Mound." The field has been so long under cultivation that the effigy outline has been obliterated. To the north and south of this mound there are said to have been some large eagle mounds.

Boscobel Township: Section 28. A group, previously reported as the Ruka mounds, consists of two bird effigies; surveyed with tapeline and prismatic compass. There are camp sites on the east, south and west.

Cassville Township: Section 11. On the south side of Muddy Hollow Creek and on the high bluff above, on Mr. Fishnick's property, are 10 conical and 8 linear mounds. They were surveyed with tapeline and prismatic compass. There is a camp site at the base of the bluff. On the south-east corner of the same section there are 17 mounds consisting of 1 linear, 15 conicals and 1 canine effigy. The field was in growing crops and could not be surveyed.

At a site on the bluff nearer the Mississippi River was a linear which was surveyed with tapeline and prismatic compass. There is said to have been others but they have been destroyed by cultivation.

Section 13. On the flats south and east of the Dewey farm house is a group of about 65 conical mounds, some of which were very large. They have been nearly obliterated by cultivation. These were surveyed with a plane table. Two were excavated by the Museum expedition. There is a large camp site on the same location. On the bluff east of the

Dewey house are several mounds but they were not surveyed. .

Section 27. There is a camp site on the Matt Adrian farm. There are said also to have been mounds there.

Glen Haven Township: Sections 27 and 34. On a high ridge, commencing about two miles south of the village of Glen Haven and extending to Goodenough Hollow, is a group of 65 mounds consisting of linear, conical, chain and dumb-bell types. These were surveyed with the tapeline and prismatic compass. First reported by George Foehringer.

Potosi Township: N. $\frac{1}{2}$ of S. $\frac{1}{2}$ of section 6. Next to the Mississippi River on high bluffs is a group of 23 mounds. This was previously reported as the John Kading farm and now belongs to Mr. Schall. These were surveyed with tapeline and prismatic compass.

S. W. $\frac{1}{4}$ of Section 5. There is a camp site on a sand hill back of the A. Richter farm.

N. W. $\frac{1}{4}$ of Section 9. There is a camp site on the flats south of the C. B. & Q. R. R. tracks.

N. W. $\frac{1}{4}$ of Section 10, There is a camp site between the C. B. & Q. R. R. tracks and the road.

N. W. $\frac{1}{4}$ of N. W. $\frac{1}{4}$ of Section 28. Here is a group of 5 mounds consisting of 1 bird, 1 linear and 3 conicals. There are the remains of other mounds that were destroyed by the road, and reason to believe that others extended across a cultivated field. Surveyed with tapeline and prismatic compass.

Section 33. The Fred Wurster mound is located in the extreme N. W. corner of the section. This is of linear type. Surveyed with tapeline and prismatic compass.

Section 36, T. 2 N. There is a camp site at the railroad siding at Blake. Reported by Mr. Ernest Bright.

Waterloo Township: Section 3. S. W. $\frac{1}{4}$ of S. W. $\frac{1}{4}$ of section on the Emma Blackburn place, on the north side of Marlow Creek where it joins the Grant River, is a group of 2 linear mounds. Surveyed with tapeline and prismatic compass. A group of 47 mounds surmount a high bluff on the south bank of the Grant River, starting on the Nick Adams place and following the ridge for nearly a mile. There are 6 birds, 5 linears and 2 animal effigies; the rest are conicals. Surveyed with a plane table.

Section 5. The Clarence Raisbeck group, consisting of 85 mounds, including 42 conicals, 14 bird effigies, 11 animal effigies, 13 linears, 1 chain and 1 linear with a conical mound on one end. This group was surveyed by Mr. W. C. McKern with a transit.

Section 6. N. W. $\frac{1}{4}$ of N. E. $\frac{1}{4}$ of section, on the John Glassmaker place, a group of 6 mounds, 2 of which are linear and the rest conical. Surveyed with tapeline and prismatic compass. N. W. $\frac{1}{4}$ of S. E. $\frac{1}{4}$ of section, back of the William Glassmaker house on a high hill, 1 small conical mound. There is also a group of mounds on the John Bausch farm. These were not surveyed.

Section 28. A group of 30 conical mounds on the Henry Schaal place. They are situated on the edge of the bluff on the south bank of the Grant River. Surveyed with tapeline and prismatic compass.

Woodman Township: Section 12. There is a camp site east of the village of Woodman and north of the C. M. & St. P. tracks.

Collectors and Collections: The Gardner collection of Platteville is now in Milwaukee at the home of Mr. K. B. Oyer. It consists of arrowpoints collected from all parts of the county. Paul E. Grimesey of Bagley has a fine local general collection of materials found in and around his neighborhood. George Foehringer of Cassville has a fine local collection of specimens gathered in his vicinity. Henry Pink of Lancaster has a local collection of Indian artifacts. Otto Roesche of Lancaster has a small collection. Earl Weisbeener has made a fine collection of artifacts gathered on his farm and lands adjoining near Lancaster on the Beetown road. William M. Rinlaud, editor of the Platteville Witness, has a small collection. Mr. Grindel of Platteville has a small collection. Prof. J. A. Wilgus of the State Teachers College at Platteville has charge of a fine collection of Indian artifacts. Otis Culver is a collector of pottery in and around Bagley. Charles Taylor of Bagley collects arrowpoints. Mr. Ben Orr of Glen Haven has a small local collection. Julius Bandacow of Cassville has a collection of arrow points.

Mr. Alton K. Fisher of the Milwaukee Public Museum conducted a survey of Washington Island in September, of which a preliminary report has appeared in a previous issue of this series, under Archeological Notes and News.

It is hoped that other reports will be received soon.

REPORT OF SURVEY WORK IN SAUK COUNTY

Milton F. Hulburt

During the year of 1931 little effort was made to re-examine mounds and sites that have previously been described in the Wisconsin Archeologist. Attention was directed to plotting additional trails and a survey of the fields along the trails for camp site material. Special interest was taken to collect all specimens of pottery, large or small, with the result that a number of new pottery-bearing sites were located.

The greater part of my 1931 survey was made in the Baraboo River Valley in central and western Sauk County. In previous publications, little has been written regarding the numerous camp sites located along creeks flowing into the Baraboo River. By the aid of soil maps, sandy fields adjacent to the river and its tributaries were examined, to show a high percentage yield of camp and workshop materials. In Section 20, Excelsior Township, enough pot-sherds were found by Mr. Richard Adams and the writer to restore a pottery cup about the size of a coconut. Pottery remains in western Sauk County are very scarce and a large percentage of the sites produce no pottery.

Three uncharted mounds were surveyed and mapped. The mounds are located on the Sprecher farm, Sec. 4, T. 9N., R. 5 E., Troy Township, Sauk Co., and consist of one linear and two effigy types.

A check up of my survey work in Sauk County indicates that I have found archeological data, mostly sites, in 39 different sections that were not on record in previous publications. Of the total, only eight sections have yielded pottery remains. An archeological map of Sauk County has been prepared, and by the use of colors I have indicated the recorded areas, and areas that have been surveyed by the writer.

A CARD INDEX METHOD FOR RECORDING ARCHEOLOGICAL SURVEYS

Milton F. Hulburt

For quick reference to archeological data for any particular township or section, I have always felt that a card index system could best serve the purpose. Often times, in order to answer inquiries regarding certain areas, it becomes necessary to refer to previous publications and to search extensively through notes. With the use of cards a great deal of this work may be eliminated. New material may be added to the file from time to time, thus making an up to date reference to archeological survey progress.

After numerous trial forms, I found a 3 x 5 card with printed outline most satisfactory (Figure 9). Each card has

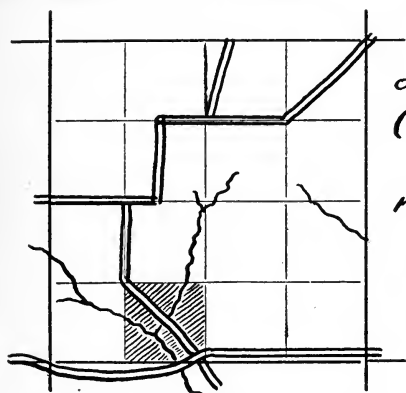
SEC.	T	N. R	E.

Fig. 9. Archeological survey form card

at the top a space for the name of the site area or feature with spaces for the number of the section, town and range. On each card is printed an outline of a section two inches square. This square is again divided by smaller lines into sixteen squares each representing an area of forty acres. If one wishes the key square to represent only a quarter section, then each square is reduced proportionately. However, for practical purposes, full section representation is most desirable. The cards are filed in sequence of section numbers and indexed according to townships (Figure 10).

Ah-ho-cho-ka Village

SEC. 29 T 12 N. R 4 E.



40 acres of land
of Chief Ahhochoka
(Winnebago)
Friend of pioneer
residents

Wis Arch. 1922
Western Sauk Co
Vol. 1 No. 3.

Fig. 10. Filled-out form card

The file should contain a card for each section containing archeological data. In the case of a preliminary survey, as soon as a site is discovered or reported a card should be immediately placed in the file for future reference.

The use of colored pencils or ink may well be applied to indicate sites or mound areas. Personally, I use orange for an area previously surveyed and described in publications, green for an area under survey and yellow for areas reported by residents but not checked or verified. The advantage of using yellow is that, if it is found to have been previously surveyed, it may be shaded to orange, and likewise to green as soon as investigated.

In forwarding specimens to a museum, it is well to inclose a card with specimens showing the location of the site from which the material was taken. This of course to be followed by the customary detailed report of the results of the survey.

The card system of recording data resulting from field survey work must not be confused with the more elaborate and necessary note book system. The cards are merely designed to give a quick reference to archeological data.

ARCHEOLOGICAL NOTES

Meetings

September 21, 1931. President Charles G. Schoewe presided. Mr. W. C. McKern acted as secretary in the absence of Secretary Brown. There were about twenty members and visitors in attendance.

Reports of archeological investigations conducted by several of the members present, during the past summer, were received. Mr. A. P. Kannenberg reported on the excavation of an old Winnebago camp site located at the confluence of the Fox River with Lake Winnebago, at Oshkosh. He described the technique employed in the excavation, and the pottery, shell and bone artifacts obtained. He exhibited his field notes, maps and some selected specimens. His report was discussed by the Messrs. John G. Gregory and W. C. McKern. Mr. Geo. L. Pasco reported on the progress of an Indian mound survey which he is conducting in Marquette County for the Society. He told of the investigation of some burial places near Kingston, Green Lake County. He told of being present during some mound excavations undertaken by Philleo Nash, a Wisconsin University student, at Ross Lake, Adams County. Iran Otto told of recovering a large earthenware vessel on a camp site in Green Lake County. This was rather extraordinary in having a flat bottom. Mr. T. L. Miller reported that in an archeological survey of Grant County which he conducted for the Milwaukee Public Museum he had located twenty mound groups, containing a total of 320 mounds, and ten camp sites. He had also secured data on many private collections. Mr. H. H. Smith gave an account of a recent re-visit to the Seminole Indians in Florida. He described their mode of life and customs. The Seminole have changed but little during the period of their recorded history. Mr. Schoewe told of a visit to the intaglio effigy preserved in River Park at Fort Atkinson, and to a group of mounds located at Hoard's hotel, Lake Koshkonong. Mr. Gregory contributed the information that a stockade had been built on the site of Fort Winnebago prior to the erection of the fort. Mr. A. K. Fisher reported on a general survey of Washington Island made by himself. Mr. G. M. Thorne described his visit to an old camp site at Nagowicka Lake. Mr. Frey told of the excavation of a Washington County mound. Mr. W. S. Dunsmoor reported that he had been unable to devote much time to conducting investigations in Green Lake County. Mr. Schoewe had given a talk to Boy Scouts in camp at Lake Amy Bell.

The President reported that Secretary Brown had been one of five men who had received honorary doctors and masters degrees from the University of Wisconsin during the June 1931 commencement.

October 19, 1931. President Schoewe conducted the meeting. There were thirty-five members and visitors present. Secretary Brown announced the election by the Executive Board of the following annual members:—John G. Franz, Darlington; Robert B. Halpin, Madison; Dr. C. J. Heagle, Seymour, Dr. C. L. Fortier, Charles T. Frey, and J. Maitland Cook, Milwaukee. The Salzman Library, St. Francis, and Lawrence College, Appleton, had been accepted as institutional members. Dr. Geo. L. Collie of Beloit had been made an honorary member.

John Bell Chapter, D. A. R., Madison, had erected a fine tablet marker on the old Milwaukee-Madison-Mississippi River trail, at Madison. The Society had expressed its appreciation to the ladies of the Chapter. Mr. Einert Jensen of Wisconsin Dells had undertaken

the preservation in a private mound park of several groups of Indian mounds located near that city.

Mr. Schoewe stated that lapel buttons bearing an arrowhead device and the Society's name had been ordered and would soon be available to all members. Mr. H. H. Smith reported on the progress of the work of the Biography Committee. Mr. McKern requested the contribution of papers to the Wisconsin Archeologist.

Dr. Paul B. Jenkins of Williams Bay, gave an interesting lecture in which he described in detail the program of the recent Lake Geneva Centennial celebration. This he illustrated with interesting exhibits. He told of the addresses delivered in the two days program by Louise P. Kellogg, Alonzo Pond and Charles E. Brown, members of the Wisconsin Archeological Society.

Mr. T. M. N. Lewis told of some excavations of an Indian camp site located near Paducah, Kentucky, and in which he had participated. He exhibited several stone spades, clay pipes, a pottery trowel and bone implements obtained from this site. He also showed some photographs.

Mr. Ringeisen exhibited an interesting birdstone found near Glen Flora, Rusk County. To obtain it he had made an automobile journey from Milwaukee to Glen Flora, a journey of 585 miles. It was found in an Indian dance circle on the banks of the Jump River.

November 19, 1931. At this meeting, held in the Trustee's Room of the Milwaukee Public Museum, there were one hundred members and visitors present. President Schoewe was in the chair. The election of Mr. George Overton, Butte des Morts, as an honorary member, and of Dr. Paul H. Nesbitt, Beloit, as an annual member was announced. Mr. H. H. Smith offered an amendment to the by-laws relating to the membership dues of delinquent members. This provided for the giving of notice by the Treasurer to members in arrears in their dues:—ninety days to those owing two years dues, sixty days to those owing three years dues, and thirty days to those owing four years dues. Being an amendment, this resolution was laid on the table, to be considered and acted on at the December meeting.

Mr. Geo. M. Waite, of Wauwatosa, gave an interesting lecture on "Desert Sheiks", which he illustrated with autochrome stereopticon slides. He had accompanied the last Logan Museum expedition to the Sahara Desert as photographer. While there he had taken advantage of every opportunity to observe and photograph the home life of the natives. This lecture was discussed by Dr. A. L. Kastner, Mr. George A. West and others present. Several members made interesting exhibits of Indian archeological and ethnological specimens during the meeting.

December 21, 1931. President Schoewe presiding. Seventy-six members and visitors were present. Secretary Brown announced the election by the Directors of Miss Rachel Mary Campbell and Louis B. Siegrist of Milwaukee as annual members. Mrs. Babina M. Dengel, of Madison, was elected an honorary member. The amendment to the by-laws offered by Mr. Smith at the November meeting was read and adopted.

Dr. Paul H. Nesbitt, of Beloit, gave an interesting lecture on "The Archaeological Explorations of the Logan Museum in the Southwest." He spoke of the exploration of the Mattocks Ruin, in the Mimbres Valley, in southwestern New Mexico, a report of which investigations the Logan Museum has since published. Of exceptional interest were some of the pottery bowls bearing realistic human and animal figures obtained in this ruin. The speaker presented an interesting picture of the ancient agricultural and hunting tribes of the Mimbres Valley and

of the evidences of their life as shown by the presence of numerous cliff dwellings, pueblos and widespread agricultural areas. He illustrated his lecture with a fine collection of lantern slides. Various members participated in the discussion which followed.

Mr. Schoewe told of a visit made by himself and Dr. Kastner to a group of Indian mounds located on the south shore of Lake Puckaway. Dr. Kastner described an interesting pit and a probable boulder mortar found there. Mr. Rudolph Boettger described the partial excavation of a mound located in Marquette Township, Green Lake County.

Mr. Arthur Gerth exhibited an unusually interesting group of nineteen pecked stone celts of different shapes and sizes and three chipped flint celts. Mr. Schoewe showed an exceptionally fine old wooden Potawatomi food bowl, and two silver bracelets made by the same Wisconsin Indians. After a discussion of these the meeting adjourned.

PUBLICATIONS

From Mr. Carlyle Morris comes a plea for more bibliographical data. It is not always an easy matter for interested students of archeology to obtain accurate information regarding new publications, including the price and place whence they may be obtained. What better medium for such information could be found than *The Wisconsin Archeologist*? The editorial staff is inclined to agree with Mr. Morris, and if others who would appreciate this service will address their desires to the editor, a serious effort will be made to list important publications in the Notes and News columns of this quarterly. The following recent publications have come to our attention.

Swanton, J. R., *Source Material for Social and Ceremonial Life of Choctaw Indians*, Bureau of American Ethnology, Bulletin No. 103, 270 pages, price 60c. This book presents valuable information on the social organization, government, property, crime and punishment, education, marriage, division of labor between sexes, games, travel and greetings, war customs, burial customs, religion and medicine of this Indian tribe originally located approximately in southeastern Mississippi.

Funkhouser, W. D. and Webb, W. S., *The Duncan Site*. University of Kentucky, Repts. in Archeology and Anthropology, Vol. 1, No. 6, 71 pages, price 50c. This is a report on investigations of prehistoric burial grounds on the Kentucky-Tennessee line, between Trigg County, Kentucky, and Stewart County, Tennessee. Sixty-two graves were excavated. These were scattered in a haphazard fashion over an area of approximately five thousand square feet. "In all cases the graves consisted of a flat, pavement-like floor, made of comparatively small pieces of thin limestone fitted rather closely together. The walls consisted of heavy flat limestone slabs set on edge, imbedded in the earth to a depth of three or four inches below the floor of the grave and probably extending to within a few inches of the surface at the time of the burial." All of the graves contained burials in the flesh with the exception of two bone burials. As a rule the burials were fully extended with arms and legs straight. Three double burials were found, consisting of infants placed with adult females. A pottery effigy water bottle and four small pottery vessels were found associated with the dead in this stone grave cemetery. The report is profusely illustrated.

Du Bois, Cora and Demetracopoulou, Dorothy, *Wintu Myths*. University of Calif. Pubs. in American Archaeology and Ethnology, Vol. 28, No. 5, Berkeley, Calif. 135 pages, price \$1.25. The seventy-five myths recorded in this paper were collected among the Northern Wintun Indians of California during the summer of 1929.

Shapiro, H. L., *The Alaskan Eskimo*. Amer. Mus. of Nat. Hist., Anthropological Papers, Vol. 31, Part 6, New York City. 34 pages,

illustrated, price 50¢. A study of the relationship between the Eskimo and the Chipewyan Indians of central Canada.

Wissler, Clark, *Observations on the Face and Teeth of the North American Indians*. Amer. Mus. of Nat. Hist., Anthropological Papers, Vol. 33, Part 1, New York City. 33 pages, price 40¢. A highly technical paper discussing physical similarity and dissimilarity between various Indian tribes.

Vaillant, G. C., *Excavations at Ticoman*. Amer. Mus. of Nat. Hist., Anthropological Papers, Vol. 32, Part 2, New York City. 241 pages, many illustrations, price \$2.00. The results of recent important archaeological investigations in the Valley of Mexico.

Holand, H. R., *The Kensington Runestone*. Published by the author, who will state price if request is sent to him at Ephraim, Wisconsin. This book is a history of the stone slab obtained at Kensington, Minnesota, some years ago, which bears an inscription in Scandinavian runes purporting to be a record of an early group of Norse adventurers in that state.

The Denver Art Museum, the following leaflets: *The Puget Sound Indians*; *The Havasupai Indians*; *Puget Sound Indian Houses*; *Santa Clara and San Juan Pottery*; *The Ojibwa or Chippewa Indians*. Nos. 32, 33, 34, 35, and 36, respectively. Prices may be obtained by writing to Fredrick H. Douglas, Curator of Indian Art, Denver Art Museum, Denver, Colorado.

Shetrone, H. C., *Primer of Ohio Archaeology*. Published by the Ohio State Museum, Columbus, Ohio. The price may be obtained by writing to Mr. Shetrone. This was published in response to a popular demand for a brief outline of the main features of prehistoric archaeology in Ohio, and is intended primarily for the use of students in the elementary schools. The pamphlet has 42 pages and 28 illustrations.

Leechman, D., *Technical Methods in the Preservation of Anthropological Museum Specimens*. Reprinted from the Annual Rept. of the National Museum of Canada, 1929. 31 pages. Copies may be obtained by applying to W. H. Collins, Acting Director, National Museum of Canada, Ottawa, Ontario. The paper includes discussions of collecting in the field, cleaning, repairing, restoring, numbering, storing, exhibiting, protecting against pests, and the treatment of various materials of vegetable, animal and mineral origin.

The *American Anthropologist* for January-March, 1932 (address Dr. Robert H. Lowie, National Research Council, 2101 Constitution Ave., Washington, D. C.), contains the following articles: *Configuration of Culture in North America*, by Ruth Benedict; *Aboriginal Survivals in Mayo Culture*, by R. L. Beals; *The Problem of the Sweet Potato in Polynesia*, by R. B. Dixon; *Pottery on the Middle Columbia*, by V. F. Ray; miscellaneous articles by W. S. Stallings, Helen H. Roberts, Gene Weltfish and R. L. Roys.

Under the title of "Hobby Riders", Charles E. Brown, State Historical Museum, Madison, is publishing a booklet of archeologists, historians, naturalists, and collectors of every kind and other interesting people in Wisconsin, Northern Illinois and Northern Michigan. Accompanying these useful data there is a section devoted to tourist trails (scenic, historic and industrial) in Wisconsin. This booklet is expected to be off the press and ready for circulation early in March.

WISCONSIN FIELD WORK

Mr. and Mrs. Alton K. Fisher and a brother of Mr. Fisher recently surveyed an ancient camp site and mounds situated on a prominence on the west bank of the outlet of Anderson Lake, Oconto County. The camp site was flanked on either side by one or two conical mounds. These mounds averaged about fifty feet in base diameter and the larger, in spite of the fact that the top has been removed, is ap-

proximately seven feet in height. The smaller mound is between three and four feet in height. The camp site produced implements of chert and quartz and the Lake Michigan type of pottery. Surface refuse indicates relatively sparse occupation.

WISCONSIN ARTIFACTS

Mr. M. S. Thompson, of Sheboygan, reports finding in that vicinity fragments of a double pottery vessel. The two sections of the pot, each about the size of a large cup, were apparently joined at the rims. The ware is of Lake Michigan type. In so far as known to the editor, this shape is unique for Wisconsin.

Mr. E. F. Richter, of Milwaukee, has just acquired a fluted axe found last summer by a farmer in Columbia County. The axe is nine inches in length and weighs five pounds and five ounces. The flutes are placed longitudinally on one side and horizontally on the other, and one flute circles the head. An exceptionally fine, smooth granite axe, of the long-bitted grooved type, was also secured by Mr. Richter from the same gentleman.

NEW MUSEUM EXHIBITS

Museums in every part of the United States are preparing to participate in the celebration of the George Washington Bicentennial (1732-1932) by preparing appropriate exhibits, lectures and similar features. The State Historical Society of Wisconsin is printing a booklet describing the valuable George Washington letters, manuscripts, maps, books, pamphlets and specimens among its historical treasures. The State Historical Museum will make an extensive exhibit of these and of other Washingtonia. The Milwaukee Public Museum is preparing an exhibit consisting of a comprehensive photographic collection of copies of Washington portraits. This collection was started in 1897 by Mr. Towne L. Miller. It includes all the well known, and many little known representations of the first president, numbering some hundred and twenty subjects. This will be on exhibit for one month starting about February 1. About fifty other historical museums in the state have been requested to prepare commemorative exhibits.

The year 1932 is also the centennary year of the Black Hawk War, a White and Indian conflict which was the cause of the greatest anxiety to White settlers in Illinois and Wisconsin. In this state commemorative markers and monuments have been placed on the Black Hawk War battlefields of the Pecatonica, Wisconsin Heights and the Bad Axe, on the sites of Fort Atkinson and Blue Mounds Fort, and on the old war trail on the campus of the University of Wisconsin. Other markers should be erected this year on other sites identified with this war which, through the attention it received in eastern papers, did so much afterwards to bring an army of settlers to the prairies of Illinois and Wisconsin.

Five additional birdstones have been added to the number of those rare and interesting ceremonial objects in the Henry P. Hamilton collection in the State Historical Museum at Madison. The largest collection of birdstones in the Northwest is that of Mr. Joseph Ringelsen at Milwaukee. This fine collection is the subject for an article in this issue.

The Milwaukee Public Museum has just installed a realistic restoration of an Aztalan burial, just as it was encountered at the time of excavation. The well preserved bones of an adult female, in extended position, are seen literally loaded down with more than two thousand disc-shaped shell beads.

The Missouri Magazine announces, in a well-written illustrated article by Mabel D. Thompson, the gift to the Missouri Resources Museum, by Miss Mary Alicia Owen, of St. Joseph, of her collection of ethnological specimens made among the Meskwaki (Fox) Indians in Iowa in the years 1881 to 1889. Miss Owen is the author of "Folk-Lore of the Musquakie Indians", published in 1904. She also presented a Meskwaki collection to the Cambridge University Museum, England, and a smaller collection to the State Historical Museum at Madison. Dr. A. C. Burrill, formerly with the Milwaukee Public Museum and the University of Wisconsin, is the director of the Missouri Resources Museum.

MISCELLANEOUS

The Central Section of the American Anthropological Association will hold its 1932 meeting at Ann Arbor, Michigan, on Thursday and Friday, March 17 and 18. Geo. R. Fox, secretary-treasurer of the Section, has sent out a circular letter to all members requesting the titles of papers to be presented, and urging a full attendance of members.

The Midwest Museums Conference, the Wisconsin Academy of Science and the Wisconsin Archeological Society meet jointly in annual convention at the Milwaukee Public Museum, April 8 and 9. Interesting programs are planned and a large attendance urged.

The Michigan-Indiana Museums Conference held its annual meeting at Peru, Indiana, on Friday, January 15. Mr. Edward M. Brigham, Jr., of Battle Creek, is the secretary of the Conference which was organized by George R. Fox and others at Three Oaks, Michigan, some years ago. It has been suggested that a union of the Michigan-Indiana Conference with the Midwest Museums Conference (Wisconsin, Minnesota, Iowa and Illinois museums) in a strong Central Museums Association is now very desirable.

Dr. Anton H. Sohrweide, who recently returned from his station in Virginia to recuperate from an illness, is preparing a paper on Wisconsin Indian trade sheet copper and brass artifacts. He is staying at his home in Watertown.

Dr. A. Gerend, well known to members of this society for his work in and about Sheboygan, and other archeological activities, is now living at Deer Isle, Maine.

President Charles G. Schoewe has on hand a supply of official Wisconsin Archeological Society buttons, fashioned of copper, to be worn on the coat lapel. Members may obtain these, while they last, by addressing Mr. Schoewe at 2260 North 60th St., Milwaukee. Price 45 cents.

The Wisconsin Archeologist

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April 1932
NEW SERIES

No. 3



**PUBLISHED QUARTERLY BY THE
WISCONSIN ARCHEOLOGICAL SOCIETY
MILWAUKEE**

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WISCONSIN ARCHEOLOGICAL SOCIETY

The Society is a state department, receiving a part of its support from the state. Its funds are under state control. Its work is well and widely known. It has received the approval of leading American archeologists, who agree that it deserves the full support of all Wisconsin citizens interested in the state's archeological history.

The Society's activities comprise the location, recording, investigating and preservation of Wisconsin Indian remains, folklore and history, all of which are rapidly disappearing and must be recorded and saved immediately if ever.

Through its efforts many fine groups of Indian earthworks and other aboriginal monuments and remains have been permanently preserved to the public. Most have been marked with descriptive metal tablets. Others are being protected. Surveys and explorations have been conducted in many sections of the state.

It is also engaged in encouraging the establishment of public museums and collections and in discouraging the manufacture and sale of fraudulent antiquities.

Regular monthly meetings of the Society are held during the months September to May, inclusive, in the Trustees Room of the Milwaukee Public Museum. Meetings are open to the public. No regular meetings are held during the months June to August, inclusive. Special field meetings are occasionally held during the vacation months.

The results of its research and other activities are made known through its regular quarterly publication, The Wisconsin Archeologist. Thirty volumes have appeared. The Society has a large membership distributed through every part of the state.

It is co-operating to the fullest extent with all of the various scientific and educational organizations and institutions of Wisconsin.

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Wisconsin Archeological Society

Milwaukee, Wisconsin

Incorporated March 23, 1903, for the purpose of advancing the study
and preservation of Wisconsin antiquities

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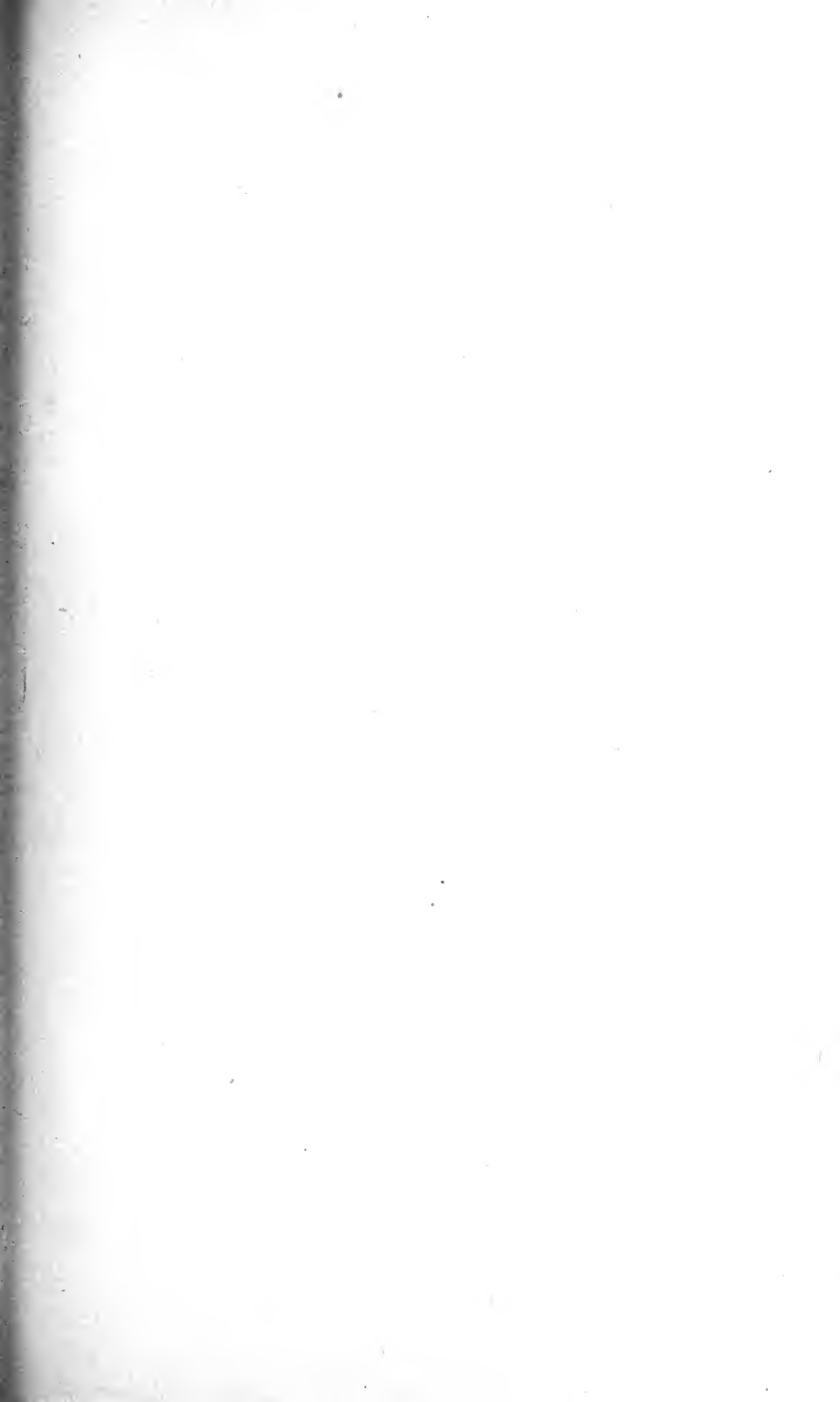
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Dr. George L. Collie.

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A DISTINGUISHED MEMBER OF THE WISCONSIN ARCHEOLOGICAL SOCIETY DR. GEORGE LUCIUS COLLIE

Geo. A. West

At a recent meeting of the Wisconsin Archeological Society it was learned, with regret, that Dr. George L. Collie, of Beloit, Wisconsin, had retired from the active duties of his busy life in order to spend the remainder of his declining years in the East.

In view of the fact that Dr. Collie has been an active member of this Society for more than thirty years, and in consideration of the distinguished services rendered to it by him, he was, at once, made a life member of the Society, and the writer was asked to prepare a short summary of the Doctor's life for publication in the Wisconsin Archeologist.

Dr. Collie was born August 11, 1857, at Delavan, Wisconsin, and was the son of Joseph and Ann (Foote) Collie. His father was a native of Aberdeenshire, Scotland, and his mother was born at Cleveland, Ohio. His father was pastor of the Congregational Church, at Delavan, for forty-one years (1854-1895). Dr. Collie was married to Katherine E. Burrows of Chicago, in 1896. They have two children, Helen Tannissee and Kenneth Gordon. The former married R. T. Tuttrup of Appleton, Wisconsin, and died April 10, 1931, leaving one son, Collie Tuttrup.

George L. Collie attended the public schools of his native town, graduating from Delavan High School in 1875. He was a student at Beloit College Academy during 1876-77 and entered Beloit College in the fall of 1877, graduating in 1881. Immediately following his graduation, he managed a

summer resort for four years and worked in a railroad office in Chicago for one year, thus acquiring considerable business experience.

In 1886 he began teaching and served as Principal of the Delavan High School until 1890, following which he took post-graduate work at Harvard University (1890-93), receiving the degrees of M.A. and Ph.D. He became a Professor of Geology at Beloit College in 1893, as well as being appointed Curator and Director of the Logan Museum, at Beloit, holding the latter position until June 30, 1931. Dr. Collie continued as Professor of Geology until 1925, when he resigned to become Professor of Anthropology on a foundation given by Dr. F. G. Logan, of Chicago, and named, "The George L. Collie Foundation". Through the generosity of Dr. Logan, the museum became one of the best in the country in its exhibits of archeology. Dr. and Mrs. Logan financed several expeditions for research work, under the direction of Dr. Collie, resulting in the securing of many valuable collections for the Logan Museum. In 1894 a very successful expedition spent considerable time in Alaska. In 1902 Dr. Collie conducted another to Germany and Italy where much desirable material was secured for the museum. In 1910 Dr. Collie headed an expedition around the world, for collecting purposes, with marked success, especially in East Africa and the South Sea Islands.

In 1925 Dr. Logan and the Beloit College Board of Trustees arranged to give to Dr. Collie the sum of \$15,000.00 annually for five years, to carry on investigations in the study of the life of palaeolithic man. For five successive years these investigations were carried on, chiefly in central France, around Les Eyzies, and in Algeria. Several bulletins have been published based on the work of these years and a very large collection brought to the Logan Museum.

In addition, Dr. Collie has directed considerable archeological research work in our own country, including the Mimbres region of New Mexico, the Mandan country of the Dakotas and Wisconsin. Important collections have been obtained from each of these areas.

Dr. Collie has written many articles on geological, geographical and archeological subjects, several of which have appeared in the Wisconsin Archeologist. One especially in-

teresting bulletin on "Researches in Wood and Portage Counties", Wisconsin, based on work undertaken in conjunction with Robert Becker, deserves special mention. Dr. Collie's very interesting monograph on "The Aurignacians and Their Culture", published by the Logan Museum, is most instructive and should be in every library.

Dr. Collie is holder of the Lapham Research Medal, presented because of his distinguished accomplishments in the archeological field. He is a fellow of the American Association for the Advancement of Science and of the Geological Society of America, a member of the American Anthropological Association, American Museums Association, Phi Beta Kappa, Beta Theta Pi Fraternity, and a Morgan Fellow of Harvard University. He is also an honorary member of the Beloit Rotary Club and a member of the first Congregational Church of Beloit.

Dr. Collie was Dean of Beloit College from 1900 to 1918, inclusive, and became the confidential advisor of thousands of students, many of whom have become distinguished. Among the latter are Roy Chapman Andrews and Alonzo Pond, well-known explorers, Ellsworth Huntington, explorer and geographer, Paul H. Nesbitt, now Curator of the Logan Museum, as well as Robert Becker, before mentioned, and others. For two and one-half years he was acting President of Beloit College and carried on the executive as well as the administrative work of that institution. In 1893 he was appointed by President Eliot a member of a committee of ten on the teaching of geography in the schools of the United States. As a member of that committee he, with two others, Professors Davis and King, prepared the first laboratory directions ever written on the study of geographic and topographic maps.

In 1918 Dr. Collie resigned the Deanship to enter war work. He served the Y. M. C. A. as educational secretary for the Liverpool district, especially aiding in the debarkation of American soldiers. He was then sent to the general army headquarters at Chaumont, France, and took charge of a large hut at Dulevant, artillery headquarters near Chaumont, and of replacement batteries going to the front, until the armistice was arranged.

In 1923 he was again appointed Dean at Beloit College but resigned to take charge of the expeditions of the Logan Museum.¹

This account does not purport to be a complete life history of Dr. Collie, but merely an attempt to outline some of his scientific achievements.

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BLACK-ON-WHITE POTTERY FROM THE MIMBRES VALLEY, NEW MEXICO

Paul H. Nesbitt

As the ceramic to be discussed below comes from a highly specialized and localized area familiar only to those few who are engaged in archaeological research in the Southwest, a few introductory remarks are necessary.

Archaeologically the Southwest includes the states of New Mexico and Arizona, with portions of Colorado, Utah, Texas and Nevada. It disregards the international boundary, dipping southward into Mexico to an unknown distance below the town of Casa Grande in the northern state of Chihuahua. Confined within the limits of this area are groups of native Americans popularly known as Pueblo Indians, so named by early Spanish explorers and priests. When the Spanish conquistadores entered the Southwest by the doorway of Mexico in 1539 they found these pueblo folk in a restricted locality much as they are today, being centered in the central parts of New Mexico and Arizona. Considering the desolateness of the area the Spaniards marveled at the degree of accomplishments attained. Here in these vast stretches of sand with little or no water were sedentary groups practicing agriculture, making pottery and living in large communal houses of a hundred or more rooms often connected or arranged in the modern apartment house style. But this high culture had undergone a long period of development from an early non-pottery making and non-agricultural age.

In recent years the magic spade of the archaeologist has been busy and productive enough to trace out this development. Although recent finds made near Folsom, New Mexico and at Gypsum Cave in Nevada may push the occupancy of man in this region back to the late phases of the ice age, the earliest established culture in the Southwest is that termed Basketmaker. This was followed by the incoming pueblo peoples and their development is traced through five phases known as Pueblo I-II-III-IV-V.³⁷ The Spaniards came

³⁷ For a brief but excellent history of these periods see—Frank H. H. Roberts Jr., *Early Pueblo Ruins in the Piedra District Southwestern Colorado*, Bur. American Ethnology Bull. 96, 1930, Pp. 1-12.

in late Pueblo IV period while Period V represents the modern pueblos or villages as Zuni, Hopi, Acoma, etc. During those stages preceding the Spanish invasion, pueblo life was widely distributed throughout the entire southwest. Although in generalized features the culture was the same everywhere, local specializations and developments did spring up. This is not surprising when one considers that the rough character of the country and the great distance separating rivers brought about temporary, and in some cases, almost permanent isolation of groups. The Mimbres Valley in the southwestern part of New Mexico represents one of nine such areas of specialization.

During the seasons of 1929, 1930 and 1931, the Logan Museum of Beloit College, backed by the generosity and keen interest of Dr. and Mrs. Frank G. Logan of Chicago, undertook excavations at the Mattocks ruin, a Mimbres Valley ruin of approximately 100 rooms. The ruin was entirely excavated during the past season and a report published on the findings and data obtained during the first two periods of work.³⁸ The findings indicate that the village was inhabited during the last part of Pueblo II period and most of Pueblo III time, which converted into Christian age terms, would read 600 A. D. to 1000 A. D. Although the culture encountered differs in many respects from that of other southwest areas, the single outstanding specialization is pottery. Although various wares are present, all of which have their distinctive features, only the Mimbres black-on-white pottery is here considered.

The center of distribution of this ware is a broad strip extending from the postoffice of Mimbres, New Mexico, to a point midway between San Lorenzo and Deming, New Mexico, some thirty miles to the south. Although this region offers an abundance of different pottery types it is in this section that the Mimbres black-on-white ware is seen in its greatest popularity. The ware is relatively abundant at all sites that have been thoroughly excavated both in sherd form and complete vessels.³⁹ In some instances as at the

³⁸ Nesbitt, Paul H. The Ancient Mimbrenos. Logan Museum Bull. 4, 1931.

³⁹ Especially at the following ruins—Galaz, Gonzolez, Cameron Creek, Treasure Hill and Nan Ranch.

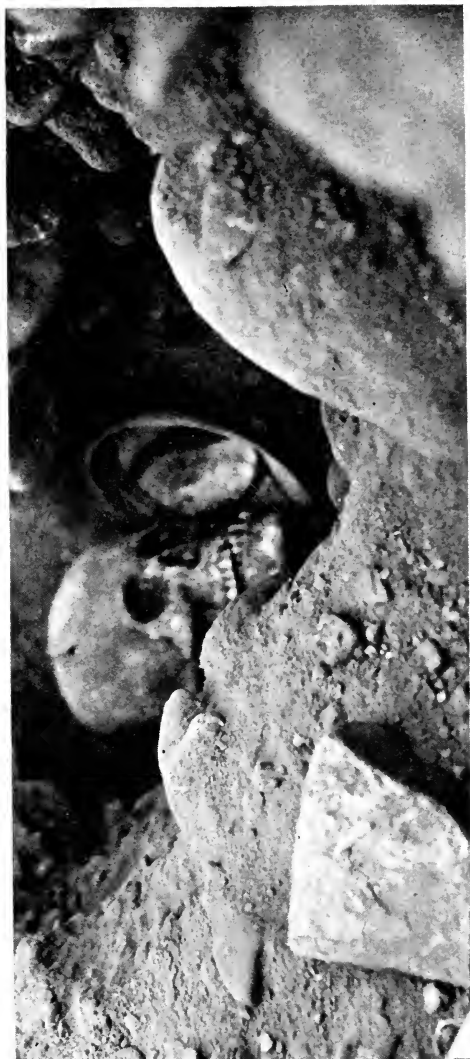


Fig. 11. Black-on-white bowl with Mimbres burial. Courtesy, Logan Museum.

Mattocks ruin it has been found in association with intrusive sherds of Chupadero black-on-white, El Paso polychrome, Three Rivers red-on-terracotta, Gila polychrome and Chihuahua wares.

The black-on-white ware was used for mortuary purposes and was not culinary in character (Figure 11). Furthermore two distinctive decorative features, geometric figures and naturalistic drawings automatically create a subdivision of this ware. Although this subdivision is based at the outset on decorative elements there are also notable differences in vessel shapes, paste and finish. Some of the defining qualities of the Mimbres black-on-white ware are as follows:

Vessel Shapes

The standard form is the shallow food bowl ranging 9–11 inches in diameter and 5 inches in depth. Vessels bearing realistic drawings are usually smaller than those geometrically decorated. Ollas and narrow-mouthed vessels were also made, the former being confined to that ware geometrically decorated. In ollas the orifice is rarely larger than 4 inches, the shoulder diameter 11 inches and the height 11 inches. The globular, narrow-mouthed vessels or seed bowls are characterized by their broad shoulders and are rarely over 5 inches in height (Figure 12). Most of the vessels have a rounded bottom but forms with a flat or concave bottom are not uncommon.

Rims

Some rims are flat while others show rounding on both interior and exterior surfaces. The rim top is usually irregular and poorly finished and not uniform in thickness around the bowl. On some vessels there is a slight swelling on the interior about an inch below the rim giving an incurved appearance. The rims are invariably painted black.

Paste, Finish and Firing

The composition of the paste is fine, sandy and evenly tempered with flakes of mica and fine grains of quartz. The hardness is variable depending upon the degree of burning to which the vessel was subjected. The bowl interiors and the olla exteriors have been made smooth by the application



Fig. 12. Mimbres black-on-white seed bowls containing cremations. Courtesy, Logan Museum.



Fig. 13. Mimbres black-on-white olla. Courtesy, Logan Museum.

of a true slip, chalky white to a gray-yellow in color. The exteriors of bowls were made smooth by the use of the hand or some blunt smoothing implement. Occasionally vessels carry a fine wash on the exterior. All vessels are well fired and in many cases overfired so that the black pigment turns to red in places.

Decoration

The decoration is almost exclusively interior although it occurs on the exterior in such forms as ollas (Figure 13), seed bowls and rare forms having straight sides and a slightly concave base. The rims of the bowls are painted black and below the rims are series of framers, either one or two wide lines or a series of fine lines drawn close together. Series of framing lines are especially characteristic of those vessels decorated with zoomorphic and anthropomorphic figures. On vessels bearing geometric designs the decoration begins at the rim and extends one-third or more of the way to the bottom of the bowl. At its termination is a broad framer, thus leaving a circular white space (the unpainted slip) in the bowl bottom. Decorations which entirely cover the bowl are not common. Opposed stepped figures in solid black and hatching are the most common decorative elements employed.

Other common motifs are interlocking key figures, interlocking scrolls, zig-zag lines, cross-hatched diamond and square figures, checkerboard, and vertical lines. Where both surfaces are decorated the interior usually has an all over design and the exterior decoration is confined to a single unit repeated two or three times. On bowl interiors the design is repeated two, three or four times and one aberrant vessel is decorated with twelve identical units. The pigment varies in color from a dull black to a brownish red depending on the degree of firing.

The most outstanding and specialized feature of the Mimbres pottery is that black-on-white ware which is decorated with realistic drawings. For keenness of observation in observing animal life and ingenuity in reproducing it by means of paint on pottery, the Ancient Mimbrenos were the most unique and skilled of all Southwest potters. The precision of workmanship is quite as remarkable as the variety in design. The realistic figure usually occupies a space in the

bottom of the bowl, the space being carefully marked off by encircling framing lines at the rim. The naturalistic drawings range from composite creatures such as a bird and a quadruped united, to drawings of birds, insects, fishes, quadrupeds and human life. True narrative scenes are present but less common than individual drawings.

Time Relations

Difference in house types representing different occupations of the Mattocks village constitute the only stratification present. Refuse heaps, so common in other areas of the southwest and present at the Cameron Creek ruin near Hurler, New Mexico (a Mimbres ruin) are absent at this village. Black-on-white ware made its appearance in the early pit-house stage (Pueblo II) and continued without more than slight modification to that time when the village was deserted (Pueblo III). Realistic decorations were more popular in the early occupation of the site than in the waning stage.

There are at hand a few data such as intrusive wares and cross finds, that give some idea of the relative chronological age of the Mimbres black-on-white ware with other Southwestern pottery types. Intrusive wares found in association are Chupadero black-on-white, El Paso polychrome, Little Colorado polychrome, Chihuahua ware and Three Rivers red-on-terracotta. These wares did not appear, however, until the Mimbres black-on-white was on the decline. In the early house types at the Mattocks ruin these foreign wares are absent whereas there is a preponderance of black-on-white.

According to Kidder,⁴⁰ Chihuahua polychrome and Gila polychrome are approximately contemporaneous and somewhat later than Mimbres black-on-white. The finding of Gila polychrome ware in the late rooms at the Mattocks ruin would tend to substantiate this. El Paso polychrome ware which also occurs in intrusive form in the late rooms has also been found in association in several instances with Rio Glade Glaze I.⁴¹ It would seem then that the glazes were

⁴⁰ Kidder, A. V., *An Introduction to the Study of Southwestern Archaeology*, New Haven, 1924.

⁴¹ Stallings, W. S. Jr., *El Paso Polychrome*. Technical Series, Bull. 3, Archaeological Survey. Laboratory of Anthropology, Inc., Santa Fe, New Mexico, December, 1931.

just being ushered into the Rio Grande region to the north when Mimbres black-on-white was disappearing. A like age relation exists with Chupadero black-on-white.

In conclusion, conditions indicate that Mimbres black-on-white ware antedates Glaze I and Chupadero black-on-white by a considerable period of time and that the ware reached its greatest popularity before the development not only of the above wares but also El Paso polychrome, Chihuahua polychrome, Three Rivers red-on-terracotta and Little Colorado polychrome. However, before the final desertion of the Mimbres Valley these new wares were gradually replacing the Mimbres black-on-white.

THE INDIANS OF VIRGINIA

Herbert W. Kuhm

Amid the extensive gum swamps and pine barrens of Virginia there existed formerly an Indian culture area of considerable importance. The culture of the Virginia Algonkians may be distinctly traced to the Gulf or Southeastern culture area, for they are less Algonkian in culture than in speech. A similar change of culture has been noted in the history of the Blackfeet, Cheyenne and Arapaho, whose Algonkian affinities stand forth only through the link of language.

In respect to material and social life, the Virginia Algonkians were converted by southern influences to such extent that, had we no information concerning their language to guide us, we would class their culture with the southern Gulf area rather than with the Algonkian to the north.

The Virginia Algonkians were of importance in that they were the intermediate tribes who conveyed to the tribes in Pennsylvania, New Jersey, and even as far as southern New England, the extensive ethnic traits of the southern Gulf culture.

Thus the Algonkians of the Middle Atlantic and the southern New England states got their corn, bean, and tobacco culture, and most of the artifacts concerned with domestic activity, their splint basketry, woven fiber fabrics, the remarkable feather technique, their mat- and bark-covered rectangular wigwams, and many other details of economic life.

The old Algonkian nomadic hunting life gave way slowly to agriculture, to which were added the corn festival, fortified stockades, ceramic influences, fish-nets, shell beads, the water-drum, the two-stick ballgame, methods of hair-dressing, the single-seam one-piece moccasin, shamanistic societies, mound erection, group burial, and the custom of cleaning the bones of the dead for burial.

When the Europeans first reached Virginia, they found many separate tribes of Indians, scattered here and there throughout the wilderness.

In 1584, two ships sent from England on a voyage of exploration, crossed the Atlantic by way of the Azores, and sailed northward from Florida along the Atlantic seaboard. The voyagers were amazed at the beauty of the country. When they landed, they were welcomed by the Indians and spent the summer and autumn in exploring the adjacent country.

When the ship returned to England at approach of winter, the commanders gave such glowing accounts of what they had seen, that Queen Elizabeth called the country Virginia, the Virgin land.

An important event in the history of the colony at Jamestown was the expedition of Capt. John Smith and a small party of men in search of the great "South Sea." They set out on Dec. 10, 1607.

Smith came in contact with the Indians in their native woodland haunts. He visited their habitations on the banks of the rivers; observed their tribal rites and customs, and gathered the details for records which enable us to know something of that early Virginia.

Smith's notes are of interest to students of Indian life. The Smith expedition first came into contact with the Powhatans, who inhabited what is called Tidewater Virginia, which extended from Chesapeake Bay to the Piedmont Plateau.

Smith drew for us full-length portraits of the Virginia Indians, who lived in wigwams of skins or lodges built of trees. They dressed in deerskins, the women wearing mantles of feathers for added warmth and adornment. Both sexes wore bead necklaces, and tattooed their bodies with puccoon, a derivative of the bloodroot.

The women were subject in all things to the men. On the hunting expeditions, they carried the burdens and built the lodges, while the warriors smoked pipes and looked on.

The forest Indians of Virginia were pre-eminently hunters, and deer was their primary game. In favorable regions they fished, but only as a supplement to the chase; attempts were made at agriculture, but the hunt was the most important task.

A curious feature of the Virginia Indians was their religion. Their god was Okee, or The One Above called Kiwassa,

the Spirit of Evil. They feared and worshipped him as they worshipped force in all its manifestations,—fire that burned them, water that drowned them, the thunder and the lightning. As to a good god, there was no such being; if there was, it was unnecessary to worship him, for they need not take the trouble to conciliate such a deity since from the very nature of things he would not harm them anyway. As to Okee, the Spirit of Evil, that was different. He had to be propitiated, and they made images of him decorated with copper, which they set up in their tribal lodges.

The great tribal lodge was at Uttamussac, on the York River. Here, on certain red sandy hills in the woods, were three great lodges filled with images of their deities, and the corpses of their chiefs, which had been embalmed and wrapped in skins.

Each district of the tribal domain had its own lodge or temple. At these tribal shrines, priests kept watch,—hideous figures with dried snake skins hanging from their heads. As they shook rattles to disperse the evil spirits they chanted hoarsely the greatness of the deity Okee, the One Above called Kiwassa.

Even the bravest of the warriors cowered before the lodge of Okee. In going up or down the river by the mystic shrines at Uttamussac, they solemnly cast copper ornaments, beads or puccoon into the stream to propitiate their deity, and made long strokes of the paddle to get away from the vicinity of the Evil One so as not to invite his divine displeasure.

The primitive Indians in the land of Powhatan were without a written language, but had names for each other, for the seasons, for every natural object and for the supernatural powers which they deified.

The years were counted by the winters or "cohonks," a word conceived from the cry of the wild geese passing southward in the annual migration at the coming of winter.

They reckoned five seasons: the Budding or Blossoming was spring; the Corn-earring time was early summer; the Highest Sun was full summer; the Fall of the Leaf was autumn, and winter was Cohonk, or the time of the flight of the geese and other migratory birds.

The months were counted by moons, and were named after their products: as the Moon or month of the Strawberry, the Moon of Stags, of Corn, of the Flight of the Geese, of Fishing through the Ice, and of the Melting of the Ice.

One of their tribal customs was the Huskanawug, when the young men were taken into the deep woods, intoxicated on a decoction of certain roots and initiated as full-fledged warriors.

Louis Hernandez De Biedma, the historian, tells us that the inhabitants of Virginia in 1539 were a hardy race, living in long houses daubed with clay and very comfortable in the winter seasons, but that during the summer months they reposed in the open.

According to De Biedma, they used sharp-edged stones, slings, bows, arrows and clubs in war and peace.

Louis Preston Summers, in his History of "Southwestern Virginia," states that many implements used by the Indians and the places of their manipulation, that is, their workshops, were still to be found at the time of his writing, 1903.

The Indians of Virginia in the sixteenth century lived in towns that were generally so built as to combine the requirements of a town and a fortification. These forts were circular and varied in size from 300 to 1,000 feet in diameter. They were sometimes built of stones, and in other instances of earth. The embankments were from 6 to 10 feet high, and in many cases were surrounded by a ditch or moat. Many stone implements and potsherds are to be found near the sites of these forts, according to Summers.

These forts are not the product of the Cherokee Indians, since they were not built after the Cherokee manner. So the inference is that the Indians who built the fortified towns were at one time vanquished and either exterminated or assimilated by the Cherokee, or driven out by them. The Cherokee are reputed to have been a very warlike people; they were arrogant warriors, and never so happy as when engaged in warfare.

The Cherokee, however, were not permitted long to enjoy the fruits of their conquest, for they in turn were driven out by the invasions of the Confederacy of the Six Nations, and in 1672 withdrew south of the Tennessee River.

In that way Virginia came to be occupied by three groups of Indians: the Monaca confederation in the west, the Manahoac confederation in the north, and the Cherokee in the south. The first two were Siouan tribes.

Before the advent of the whitemen, the Indians native to Virginia had no outside sources from which to draw their food, shelter, clothing, utensils or weapons, but were thrown entirely on their own resources in their struggle for existence.

They learned to clothe themselves in the tanned skins of animals, and shelter themselves in caves and beneath lodges made of skins or trees; to bend to their use as tools or weapons the natural and organic substances found all about them. The wood of the forest furnished clubs, bows, arrow and spear shafts. The stones at their feet were worked into points for knives, spears and arrows. Stones were also used to grind their corn, hoe their fields, sink their nets and adorn their bodies. Clay was moulded to fill their needs as kettles for cooking.

Thus did the prehistoric people of Virginia advance in learning, and progress toward a rude civilization, eventually coming to possess a fair development of agriculture, and an unwritten literature of folklore, mythology and ritual. To what height they might have attained must ever be a matter of speculation, since the entire trend of their life was disturbed, thwarted and finally destroyed by contact with what the white man, in his superb conceit, prefers to call his own vastly superior civilization.

Culturally, the forest Indians of Virginia lived in a stone age. In absence of any knowledge of skill in providing themselves with tools of metal, they were obliged to improvise useful implements and artifacts for utility, ornament, religious ceremony and money from stone. Hence stone axes, stone celts, chisels and hammers to break up wood for fuel, bark trees, hollow out logs for canoes, skin deer, break ground and the like, resulted. Of course, bone and shell were also used, but stone, being the most imperishable of these materials, now receives undue importance in our eyes, since most of the Indian artifacts which have survived the decay of centuries, are of this material.

The Virginia Indians found flint most useful, and boulders of this material were sought for in the bluffs of rivers, and highly prized. Fortunate, indeed, was the tribe that controlled a supply; not only was its source of weapons assured, but it had a commodity of great value to trade. Chunks were fractured from the native rock to be chipped later into knives, scrapers, spear and arrow points. The work of shaping the stone tools and weapons fell appropriately to the men. Quartzite was also used in the manufacture of artifacts.

All of the Virginia tribes made pottery. The raw clay was pounded and kneaded to an even consistency and then mixed with tempering materials such as pebbles, pulverized shells, burnt and powdered stones, sand, and crushed potsherds. Long rolls of moistened clay were built up into the shape desired by the process of coiling. Once shaped, the coils were blended by kneading. The surface of the vessel was smoothed by scraping with an edged implement of shell, wood or bone. Two kinds of Virginia pottery are found,—coarse and smooth. The coarse earthenware is a heavy, pebbly variety, reddish in color, and showing incised net-marks, while the smooth ware is a thinner, light-drab or gray ware, very smooth both inside and out, and otherwise characterized by an absence of incisions or markings of any kind on the body. This latter ware contains no pebbles or grit, but was tempered with powdered mussel-shells. It was polished by means of rubbing-stones. The jars were kept in a shady place until the clay had hardened, after which they were covered with corn-stalks or dry pine-bark and fired.

We now come to what is perhaps the most interesting topic in the material life of the Virginia tribes,—the woven-feather technique. It is surprising that an art so ancient and so elaborate has persisted in the face of all the deculturation that has gone on since colonial times. But surprising as it is, the Virginia Indians have not lost the art of weaving feathers into the foundation of textile fabrics. The beauty and high esthetic quality of woven-feather work have made it the supreme textile achievement in a number of ethnic centers on the Pacific coast, in California, Mexico, and Ecuador, as well as in Polynesia. In Virginia and the southeastern Gulf area, the feather technique was widely distributed.

The feathers used were primarily those of the wild turkey, shelldrake, Guinea fowl, Virginia cardinal, ducks, and flickers.

Four needles, made of the long legbones of the great blue heron were used, and a simple knitting stitch employed. As the knitting proceeded, each single feather was worked into the fabric, being caught fast in several stitches by its base and sometimes by the shank of the plume. The feathers were so firmly attached that a whole cape of wild-turkey feathers could be suspended by almost any one of its feathers without danger of its shaking loose. These capes were of a beautiful iridescent black or bronze color, and were tied about the neck with bands of finely woven duck-down. They were further ornamented with cardinal or flicker feathers. Large blankets were made with this technique, and even moccasin tops were decorated with feather adornment.

The marsh and swamp area of Tidewater Virginia is very extensive. Some of the lowlands are marshy flats covered with rushes and cattails, others are overgrown with virgin forests of cypress, swamp oak, swamp gum, maple, and red birch.

The swamps provided cover for considerable game, and it was in these fastnesses that the Indians of old gained a livelihood. The Virginia deer have survived to some extent, and some ancient deer-hunting methods are still practiced. The bear lingers on with surprising persistence in the Great Dismal Swamp. In the fall and early winter, the present-day Indians of Virginia seek and kill bear, because they are then the fattest. The bears are found in the gum groves of the swamps where they have gone to fatten on gum berries. Wolves are trapped by means of a pit. Beavers, muskrats, raccoons, opossums and ducks are still sought after.

The Indians from necessity learned how to manage themselves when obliged to proceed over the areas of mud, which naturally abound in this region. An inexperienced white man hunting here without knowing the supporting quality of mud and how to wade or crawl in it, would be lost. When hunting, the Indians sometimes became stranded on a marshy island separated from the shore by mud-bars; or, to secure game that had been brought down, it may have

been necessary to wade a hundred feet through mire of unknown depth. The art of self-navigation in mud thus became essential to these people.

They came to recognize two kinds of mud—the moderately firm, and the treacherous “floating” mud. The former could be traversed by an experienced Indian if care was taken not to allow the weight of the body to remain more than an instant upon each leg, and not to put the foot straight downward in the mud, but to proceed on flexed lower limbs, the weight carried on the shins. If the mud was of the softer, floating variety, it was necessary to advance prone on the abdomen in “turtle fashion.” Movement had to be continuous lest the body settle too deep to be worked loose. Children at an early age were taught this art, and helped their parents retrieve ducks which had been shot out on the mud-flats. Capt. John Smith in his day observed and noted the expertness of the Virginia Indians in traversing the mire.

The means provided by the Virginia tribes for transporting themselves about in the marshy wastes, except where the mud prevented, was the dugout canoe. No other type of canoe can be ascribed to the southern Virginia culture area, even though a few bark canoes strayed by trade into the tidewater area. Canoe birch does not range on the coast much below New England.

Where cypress abounded, the dug-out canoes were usually made of that tree, although yellow pine was also favored. Capt. John Smith gives the following account of canoe-making: “They make a fishing boat of one tree by burning and scratching away the coals with the stone and shells till they have made it in form of a trough. Some of them are forty or fifty feet long and will bear forty men, but the most ordinary are smaller and will bear ten or twenty. Instead of oars they use paddles and sticks, with which they row faster than our barges.”

Harriott, an early Virginia chronicler, also writes interestingly of the manner by which the primitive Indians made boats in Virginia. He says:

“For whereas they lack instruments of iron like unto ours, yet they know how to make them (boats) and to sail them where they list in their rivers. First they chose some long and thick tree, according to the bigness of the boat which

they would form, and make a fire on the ground about the root thereof, kindling the same little by little with dry moss and chips of wood so that the flame should not mount up on high and burn too much of the length of the tree.

"When it is almost burnt through, and ready to fall, they suffer the tree to fall of its own accord. Then burning the top and boughs of the tree, they raise it upon poles laid crosswise upon forked posts, at such a height as they may conveniently work upon it. Then they take off the bark with shells. On the upper side they make a fire according to the length of the body of the tree, fanning it at both ends, That which they think is sufficiently burnt, they quench and scrape away with shells, and making a new fire they burn it again, and so they continue sometimes burning and sometimes scraping, until the boat has sufficient hollowness. Thus God endoweth this savage people with sufficient reason to make things necessary to serve their needs."

The fishing practices of the Virginia Indians are worth brief mention. Fish fences were used, these hedges being built across streams to the low-water height so that the fish could pass over their tops at high tide. Then, as the water receded on the ebb flow, they would be barred from returning by the brush hedges, and the Indians would shoot the impounded fish with arrows or spear them with fish spears. The sturgeon were hooked with jig-hooks.

In some parts of Virginia, the aborigines were cave dwellers, and even to this day the caves are sources of much interesting and enlightening material for the archeologist. He finds therein the remains of their hearthfires, cooking utensils, weapons, and even themselves. The air being drier, remains are better preserved in Virginia than in our own state.

Although the larger were used for habitation, smaller caves located in advantageous places were used as lookouts for sentinels and scouts, and as stations for food and ammunition for warring parties.

In conclusion, one fact is to be remembered in connection with the Virginia Indians: upon their will and temperament three centuries ago rested the success or failure of the struggling and feeble colonies from whom evolved the America of today.

EXPLORATIONS IN WESTERN GREEN LAKE COUNTY

Geo. L. Pasco

A camp site on the property of Mr. Walter Walker, near Kingston, Green Lake County, was first investigated in June, 1931. Excavations were started in the potato patch and a series of refuse pits located here yielded quantities of ash and many good-sized potsherds, not a few of which were rim pieces. Some of these rims are decorated while many others, comprising the greater share of those found, are entirely smooth. Many are marked only on the lip, generally after the manner of the crimped border of a pie. A few lips were notched as from the imprint of sticks or reeds. Of seventy specimens of pottery rims taken from refuse pits on the Walker farm during the summer, fourteen have lip decorations, of which eleven are of the pie-crimping type. Only five of the seventy show decoration on the outer rim below the lip. This proportion of decorated pieces characterizes the pottery fragments found throughout this district, which represent the shell-tempered ware of the Grand River Culture. Potsherds other than shell-tempered are very rare.

About thirty rods east of the refuse pits mentioned above, a series of deeper pits were found which produced considerable pottery, apparently belonging to the same culture. These pits contained quantities of refuse, with which were included implements of stone, bone and copper. These artifacts occurred so frequently that one labored in constant hope and expectancy, oblivious of the intense heat of the summer sun, and after appraising the materials found, one could not feel other than well paid for the labor.

Two of the rim sherds had loop handles adjoining the rims, and one sherd was perforated near the lip as though to accomodate some fastening to serve as a handle. The surface decorations on some sherds display an effort at creating true designs. Of three pieces before me as I write, one is covered with deep incisions which leave the impression that a good portion of the vessel was so covered. One has straight lines, parallel and placed at equal distances, ex-

cuted with a smoothness showing considerable skill, and appearing to have covered practically the entire vessel. The third sherd is decorated with a design of more complexity, consisting of three inverted V-shaped figures, somewhat spread out at the base, one fitting into the other. The pattern lies immediately above the bulge of the pot and encircles the vessel. Crossing the apex of each of these sets of inverted V-shapes is a horizontal line from which vertical lines extend down the sides of the pot to the diverging lower extremities of the V-figures.

It is much to be regretted that larger potsherds were not found, as some of these beautiful patterns may have had interesting extensions not apparent because of the small size of the sherds.

Another sherd is marked with a sharp-edged implement, perhaps of stone or copper, and is apparently the result of an effort to render the job easier. The design is like two duplicated W-shapes extending parallel, one above the other.

A remarkable fact regarding these pieces of pottery is that no two decorated pieces from the same pot were encountered, and we have often wondered as to the whereabouts of the other sherds. As a matter of fact, of the several hundred potsherds taken from pits at this site, many of them good-sized, I have never seen two from the same pot. Many look as though they would fit together, but there is always some little difference. One theory, advanced by a friend with considerable experience in these matters, is that the broken pots lay around until the fragments were broken into pieces too small to be of any use to the Indians, when the refuse about the camp was raked or swept into refuse pits, prepared for that purpose; in such a case, each pit would contain a sadly mixed assortment of scattered fragments of pots. Personally, I have always thought of these pits as remaining open to receive refuse until they were filled. The reason that we find in them so many fine implements of bone and copper may be that these pits were in use at a period when the white trader was beginning to supply implements of iron, whereat those of copper and bone were discarded, so finding their way to the village dump heap and refuse pits.

While digging in August of the same year, some of the excavating party came upon five burials situated in a run-way for draining water from nearby fields. This drainage gully extended down to the banks of the Grand River. There was nothing to indicate that there might be burials at the spot. The first skeletons encountered were not preserved for study, since it was the purpose of the diggers to search for artifacts.

Burial No. 5 was peculiar in that it had evidently been dumped into the burial pit as hastily as possible; bundled up and crammed into position without ceremony. The skull was extremely thick, which made it possible for me to save all of it. I also succeeded in saving the brain case in Burial No. 4. This skull was extremely thin, in contrast to that of Burial No. 5.

I came upon Burial No. 6 while carefully digging in a refuse pit. I first encountered the top of the skull and continued work until the entire skeleton was uncovered. I then took photographs and measurements. The skull, which I preserved, was in excellent condition, with good teeth and without a single broken part or fracture. The burial was of the extended type and the bones were well preserved, as indicated by the fact that the elements of the hands and feet were in excellent condition. The bones were not preserved due to an accident. The skeleton was directed northeast and southwest and was eighteen inches below the surface.

Burial No. 7 was in extended position, directed north and south. The head was not more than eighteen inches from burial No. 6. I came upon it while digging with a shovel, since it was but slightly below the plough line. In fact, the skull had at some time been struck by a plough, turned over and broken to some extent. My spade scraped the shin bone. The skeleton was carefully uncovered and preserved for museum study purposes. The state of preservation was excellent, the finger and toe bones being in perfect condition. Many photographs, as well as detailed measurements, were taken of the skeleton in situ. Three copper beads were found at the neck.

Several weeks later, while digging near the sites of burials Nos. 6 and 7, I came upon a human leg bone, and later the other leg, thus much to my surprise establishing the

presence of another burial, No. 8. This was carefully uncovered and prepared for removal to a museum. The bones of the feet were missing, a fact for which I am unable to account. However, the bones of the hands were in excellent condition and were treated with ambroid and so removed intact as found. The skeleton was disposed flat on the back with arms extended at the sides, hands flat. The legs were drawn up slightly, but not so far as to be characteristic of a flexed burial. The knees were directed to the right with one leg bone resting on the right hand, which was somewhat crushed from the contact. The bones at the knees were unusually large and at first encounter gave rise to some speculation regarding departed cows. The skull rested on one side. Associated with the bones were several potsherds and a small celt.

A number of interesting artifacts were taken from refuse pits into the midst of which these burial pits seem to have been intruded. After the interments, ashes and other refuse continued to be dumped over the burials, a fact which may account for the excellent preservation of the bones.

The burials were all found in an area thirty feet square, and Burial No. 8 was in such a position in relation to No. 6 and No. 7 that the three determined a triangle. However, there was nothing to indicate that this arrangement was other than the result of chance. In fact, the eight burials seem each to have been placed at any convenient spot.

There are at least forty acres in the area of this camp site, and we are never surprised to encounter a burial at any place within this area, although burials seem to be most frequently found near the river. The large size of the site and the great abundance of evidence of ancient occupation found there indicate that it must have had numerous inhabitants some hundreds of years ago.

A COPPER BIRD EFFIGY ORNAMENT

Charles E. Brown

The sheet copper bird effigy ornament illustrated in figure 14 was found several years ago by Emil Blodeau on his farm located on a branch of Honey Creek, in the southwest quarter of section 7, Honey Creek Township, Sauk County, Wisconsin. On the banks of this stream there is an Indian village site from the surface of which there were collected by the owner in past years a quite large number of flint blanks, arrow and spear points of various forms, scrapers, perforators and knives, several grooved stone axes, stone celts, a grooved celt and other Indian implements. These recently came into the possession of the Wisconsin Historical Museum at Madison.

The effigy ornament is cut from a piece of thin sheet copper. An examination made by an expert of the mining laboratory of the University of Wisconsin, shows the metal to be native copper rather than European trade kettle metal. The surface of the metal is quite flat and smooth except in the several places on the head and wings of the effigy (shown in the plate) where small excrescences have been bent or beaten down and a seam near the edge of the left wing similarly treated. The effigy shows marks of rough usage, the head, body, wings and tail all exhibiting plain indications of having been bent. A thin light green patina covers the greater part of the surface of the metal.

The length of the effigy, which is plainly intended to represent a bird, is $5 \frac{15}{16}$ inches. The width at its shoulders is $1 \frac{7}{8}$ inches. The head has a slight notch at its top. A small oval perforation was probably intended to permit its suspension by means of a cord. The edges of the head are notched, probably to represent a crest. Four notches appear on one of the shoulders and five on the other. The curved wings have been broken off, one at a distance of $2 \frac{1}{4}$ inches from the shoulder and the other at a distance of $2 \frac{1}{8}$ inches. It is very probable that each wing was once at least an inch longer and terminated in a sharp or rounded point. The tail, of nearly uniform width for a distance of $1 \frac{1}{2}$ inches below



Fig. 14. Native copper bird effigy ornament, State Historical Museum. Courtesy, State Historical Museum.



Fig. 15. Sheet-copper bird effigy, Milwaukee Public Museum. Courtesy Milwaukee Public Museum.

its union with the body, is there constricted and widens gradually toward its end. The rounded end of the tail is ornamented with a central small incision with four notches on either side. The weight of this bird effigy ornament is 2 ounces.

So far as known but one other native copper sheet-metal pendant of bird form has been collected in Wisconsin. This specimen (2197), resembling the other in a general way but of slightly smaller size, is in the collections of the Milwaukee Public Museum. It was collected by the once well known Wisconsin archeologist, the late Frederick S. Perkins of Burlington. It was found by William Haskin, in 1850, on his farm at Osceola, Fond du Lac County (See figure 15). A distance of about 87 miles separates the two localities where these interesting sheet-metal bird effigy ornaments were found.

PRESENT CONDITION OF AZTALAN

Robert P. Ferry

On the United States Military Road to Prairie Du Chien, Aztalan was one of the most important stations for the over-land stage.

Eighty years ago when the stage pulled up at one of the public houses of Aztalan, the boys of the neighborhood would have solicited the passengers to go on a trip around the famous earthworks for the moderate price of a shilling with a liberal sample of relics thrown in—axheads, arrowheads and pottery fragments. The path led over the long row of large mounds on the crest of the high ground, above the river around the enclosure—a good twenty-five minutes walk. There one obtained a view of Aztalan, the site which conjured visions of the mystic might of an ancient civilization, past and gone.

The mounds stood out in high relief and the wall, with its bastions every sixty-five feet was in places as much as four feet high at the time when one of Milwaukee's well known inhabitants, Mr. C. B. Whitnall, walked out there to view of the wonders.

As we approach the corners today we cross the river not by a ford but over a substantial bridge. As we view the burned grocery site on one corner, the burned creamery to the north and the three or four rickety little houses, it is difficult to believe that such a site could ever have been suggested as a location for the State Capitol of Wisconsin, or that the two small ruins north of the road could have been taverns at one of the most important stopping places on Wisconsin's main east and west highway. There is no inn and no dinner, but the walk is there if you are not afraid of some barbed wire fences and plowed fields.

The string of mounds at the crest of the rise from the road south to beyond the crumbling church have disappeared to all but the most discerning eye. To the west of the Milford road the mound groups which once stood out in bold relief are to be seen solely by those who know. Only in the small grassed parks of the Archeological Society less than a

dozen veteran survivors of the ruthless hand of ignorance stand out in approximately the same bold relief of a century ago.

The course of the walled enclosure, the pyramid mounds and other features are difficult of discernment to the casual visitor, being not so unlike the numerous undulations of the cultivated fields.

But if you will stop you may see more than all the visitors of past generations put together.

The hand of science came too late to gather what might have been a most remarkable collection of artifacts but the revealing work of the Milwaukee Public Museum expedition under Dr. Barrett has dispelled forever the vaporings of Aztec imaginations and the Archeological Society has made available to the public, as many of you know, a small exhibit of accurate information upon the site.

The small shelter and the glass-topped table which were erected a few years ago still stand in excellent condition and the boulder with the brass plate by the roadside calls the attention of the passerby to the fact that he may linger here with interest.

Under the glass top he may see a dozen photographs of the excavations by the Public Museum with explanatory notes, an account of the location, an account of stockaded Indian enclosures in the United States, for which we are indebted to Miss Louise P. Kellogg of the Wisconsin Historical Society, and a print of the entire earthworks kindly furnished by the Milwaukee Public Museum. The diagram is set according to the points of the compass with the location of the table marked upon it so that by sighting over the map the details of the earthworks may be identified.

The community takes great pride in its fame and the exhibit is well treated except that about once a year we have to renew the glass and replace watersoaked exhibits.

If someone should devise a more indestructible form of exhibit your committee on Aztalan would be very grateful.

Interested friends have planted a number of trees, some of which will doubtless survive.

Numerous visitors stop there, many of whom, in the absence of a suitable register, leave record of their call scratched in the paint of the metal cover of the table.

The boulder on which the metal plate is affixed was hauled out of local pride by a neighbor from a mile down the road. The committee had an idea about the setting of that boulder and employed the best local talent to do the work; as the setting of the boulder neared completion the community, in its supervision of community affairs, discovered there were different ideas about setting boulders. The oldest and best talent of the village assembled at the small enclosure and in solemn conference set aside the conclusions of the committee, and with solemn and solicitous care erected the boulder upon its smallest dimension. Therefore, should you, like the committee, have misgivings on this point know then that by decision of the Conclave of the Ancient Community of Aztalan, both you and the committee are wrong.

For those of you who are uninformed, it is a pleasant trip, and a pleasant place to picnic.

The Crawfish River, which flows in front of the earthworks, was a great highway of Indian travel; numerous mound, village and camp sites line its course.

The Indian campsites of Lake Koshkonong, the intaglio below Fort Atkinson, the earthworks on and below Nigger Hill above Fort Atkinson, the mounds in the woods opposite Aztalan, the Aztalan site itself, the Indian fish dam above Milford, the signal mound on Milford Hill, the mounds and campsites of Indian Garden above Hubbleton, all lend interest to a canoe or auto trip for the adventurously inclined.

THE HIDDEN STORY OF THE GRAND BUTTE DES MORTS

Geo. Overton

No society or association has any excuse whatsoever for its existence unless every member contributes in some measure to fulfill the purpose for which that society or association was organized.

I am very glad to make my small contribution and add to the extensive and growing store of archeological knowledge that has been gathered by those faithful workers of the past and to which our efficient and enthusiastic experts of today are adding the wonderful results of their researches.

My studies have been confined to a very limited geographical area, first by necessity and later by choice. I was raised in the midst of what was once a very large center of aboriginal population, the Lake Region of Winnebago County. I have come back to live on this farm which was the location of the first permanent French trading post in this county. This adds an historical interest to our archeological field.

For more than fifty years I have been poking around where the Indian lived of old. His handiwork was everywhere. Arrowheads we understood, but what of the hundreds of other fragments of flint and stone. Many pieces had been carefully made but they were not arrowheads. Why spend a lot of time making something that would not shoot? Old timers familiar with more recent Indian customs named skinning stones, scrapers, meal grinders and hammerstones in addition to the weapons and ornaments we had found and classified.

We know not, by name, what people occupied this locality five hundred years ago. To attempt to reconstruct the home life of any tribe from remains found in a certain locality and to assign that culture definitely to any one people would be an unpardonable blunder. The people who were here of old were never permanently located for more than a few years at the most. They were constantly shifting, driving or being driven, but all left something here and there which tells of their journey.

By means of relics from we know not how many tribes or nations or thru what period of time, my task is to picture the manner, in general, in which these people met the great struggle for existence. Where I lack definite material of the past I shall go to primary sources for comparisons. Mr. L. B. Perlier, whose life overlapped mine twenty-nine years, came to reside in Winnebago County in 1830. My mother and grandfather lived at Keshena Falls eighty years ago. The descriptions of the manners, customs and crafts given me by these people has created in my mind a concept of the Indian wholly at variance with the glamour of the story-book savage.

The Indian is usually pictured as a fellow in feather bonnet with painted face sitting dozing on the sunny side of the wigwam, smoking a long pipe and meditating on his past glorious evil deeds or planning future transgressions while the squaw did all of the work. He is given as a treacherous touchy person very much inclined toward lifting his neighbor's scalp and later dangling it at his belt while he dances about a fire, flourishing his tomahawk, to the music of tom-toms and weird chanting.

A study of most collections and many museums will show only weapons, pipes and ornaments which further clinches a wrong impression.

In the struggle for existence of any people three fundamental problems must be met and solved if they are to survive; food, clothing and shelter.

I. FOOD.

A. Meat.

1. Animals. We are apt to imagine the Indian living exclusively on roasted venison. In a country abounding in game of all kinds the meat question is easily disposed of if one is in possession of fairly efficient weapons. Everything was meat in a pinch from the lordly elk to the humble but tasty muskrat. An exclusive protein diet is not sufficient to support life, especially growing life, for an extended period. The Indian had a craving for fats. Deer fat is not readily assimilated as its melting point is higher than the temperature of the human body. All bones found on village sites and in refuse pits have been cracked for the oily marrow. Por-

cupines, skunks and raccoons suffered greatly from later Indians on account of their layers of fat; hence we may reasonably assume that this liking for them was handed down.

2. Shell fish. Numerous heaps of clam shells may still be seen on the banks of some of our lakes and rivers. I have noted several that were at least twenty feet in diameter and fully two feet thick. Some of these heaps must be very old as the shells are very brittle and chalky, especially near the bottom of the heap. One heap on the south bank of Overton creek has completely disintegrated into marl. Clam shells are scattered all over every campsite that is anywhere near the river. Old fire holes often yield many shells. Were these refuse pits or the remains of an interrupted clam-bake?

The beds from which these clams were obtained lie generally in water twelve to fifteen feet or more deep. Clams are better in cool weather than in the hot months. By what means did these people get such great quantities of clams from deep water at seasons of the year when diving would be a chilly proposition? We have in our locality no material evidence that will clear this question.

3. Fish. We have found the scales and bones of practically every species of fish known to abound in our waters, from the lowly sheepshead to the mighty sturgeon. From the quantity of remains found on all campsites near water fish must have constituted a very large part of the diet at certain seasons of the year.

4. Waterfowl. Waterfowl of all kinds have always been very plentiful on our marshes and ricebeds. Would any Indian pass up a nest of duck or mudhen eggs?

5. Turtles. Bones of turtles are often found among campsite debris. In 1931 we found a pile of at least half a bushel of turtle bones in a sandblow at Stanley's Landing where a refuse pit had been uncovered by the wind. In addition to the turtles themselves, the Indians ate every turtle egg they could find.

B. Agriculture.

1. General. We have ample evidence of a very extensive agriculture in garden beds and cornhills. Each family appeared to have its own little plot of ground. Another would be near it but with rows running in a different direction.

The increase in the size or requirements of a family can be seen in the shorter rows filling in the angles between the original gardens.

The corn hills are not so numerous as garden beds but this may be due to their being confused with other hillocks. The hills at Plummers Point are about six feet apart. This might indicate they were used for some vine crop. Some tribe might have planted their crops in rows while some other tribe at some other time used the hill system. Who knows?

Among and surrounding the gardens are numerous cache pits where the surplus crop was evidently stored.

For me to enumerate the crops raised by these people would be mere conjecture or at most a list of the things raised by later Indians which might be modified by their commercial intercourse or by white influence.

2. Wild rice. Wild rice was very abundant and all early explorers mention it as used for food. Early maps show Lake Butte Des Morts as largely covered with rice. Lake Winneconne was a small pond in the middle of a rice bed. Poygan was practically one solid rice bed as were most of the bays of Lake Winnebago and the margins of all slow-moving streams. Pits are found on ancient village sites that are similar to those used by present day Indians for threshing wild rice.

3. Bulbs and roots. Many bulbs and roots were made to provide their quota of food. So-called "rat potatoes" were especially rich in starch.

4. Sugar. Maple sugar was long known by the Indians. It must have been some task to boil it down before the introduction of the iron kettle.

5. Fruits. Strawberries, gooseberries, raspberries, elderberries, June-berries, blueberries, blackberries, wild cherries, cranberries, wild apples and plums grew native to this region. Many of the firmer kinds of these fruits were dried by later Indians.

6. Nuts. Butternuts, hickorynuts and hazelnuts were the principal nut crops of this locality. One large grove of black walnut trees in the west central part of the county was the only instance of this species growing native.

From the foregoing list it is seen that there was a very large variety of foodstuffs for the most part, of items gen-

erally abundant. Except for the grains as corn and rice, the greater quantity was seasonal food. Meats, fish and fruits could be preserved by drying and smoking. Granted these people had a way of preserving and did preserve food for future use, we have no evidence they possessed storage facilities that would keep it till time of need. The cache at its best must have resulted in considerable loss from moulds in wet seasons and from the ravages of insects and animals.

I do not wish to leave the impression that in this land of plenty there was always an abundance of food. In all time and in all countries there have been fat years and lean years. Within the past decade there have been two years when there was practically no wild rice. Such a crop failure in time of old would have been disastrous.

II. CLOTHING. We have ample evidence that they killed and utilized all of the larger animals, their flesh for food, their bones and antlers for implements and their hides and skins for clothing or bedding.

A. Elk. In a refuse pit in the Zellmer gravel kame we found broken elk antlers together with fragments of other large bones probably of buffalo or moose. Clarks beach produced teeth and parts of antler. Other localities have yielded similar evidence. A sacred spring on Lake Poygan produced so-called daggers and awls made from the front leg bone of elk.

B. Deer. Deer bones and parts of antlers have been found on every campsite I have ever visited. Some of the antlers have the base still attached to a part of the skull while others have the rounded butt of the antler that has been shed.

C. Bear. Many bear teeth have been found, some of which had been drilled and others notched to be used as ornaments or charms. Many bear toe bones have been picked up. These have often been confused with human toe bones and stories of cannibalism became rife when they were found in a refuse pit.

D. Furs and skins. Beaver were abundant in Winnebago County. Their dams are still in evidence today on streams flowing thru wood lots and pastures. Many beaver teeth have been found.

We have no evidence that the prehistoric inhabitants of this locality wore clothing of vegetable fibers.

The patient researches of Messrs. Kannenberg, Dayton, Sheldon and others on the Richardson and McCauly properties, Lake Drive, Oshkosh, have disclosed remains that include practically the entire fauna of central Wisconsin. That these creatures had been utilized in some way is indicated by the fragmentary condition of their remains or by the artifacts that had been fashioned from bones or antlers. The lower strata of this site contained, without question, the relics of a people who lived in a very remote past.

III. SHELTER.

A. Dwellings. Not one scrap of material evidence remains in this locality to show what sort of dwelling the Indian had before the time of the discovery. Historical mention is made of bark and rush wigwams. The early Indian used cattail mats woven with a warp of twisted bark for the walls of his wigwam.

The woods Indians usually made a dome-shaped structure formed by bending and tying together the tops of pairs of saplings struck in the ground opposite each other in a circle. A small wigwam had twelve or sixteen such pairs. Where these poles crossed each other they were securely tied. Mats were tied to this framework to make a very comfortable dwelling especially when a small fire was lighted in the center. Light poles were suspended from the framework across above the fire for the purpose of drying garments or meat.

The Menomini sometimes used a long community house in summer. In this house each family had its own fire.

The furniture consisted of bulrush mats and blanket and skin bedding which was rolled up and placed at the sides during the daytime.

B. Habitat. We find many large village sites near or on the waterways. We have also found a large number of sites which, to the white man, are in most unexpected places. The shores of every marsh of any considerable size has somewhere a well-defined site. What attraction made those places desirable when even the usual spring of water is remote or often entirely lacking is beyond a white man's understanding. When a large site was located with a wide marsh between it and a river or lake and we wonder why it was so located, might it not be better to first answer the question, "Which is the older, the marsh or the village site?"

IV. CRAFTS AND ARTS.

A. Woodworking. We do know that Indians used wooden implements which required skill to fabricate. Why not other utensils? We accept without question bows, arrows and spears.

1. Canoes. Their principal villages were near waterways. Earliest visitors found them in possession of good canoes and skilled in their use. The dugout canoe was made of pine. Pine of the very best quality grew on the banks of the Wolf River. The birch bark canoe was in more general use as it could be constructed more cheaply than the dugout, but it required constant attention to keep it shipshape.

2. Weapons: bows and arrows, spears and warclubs.

3. Handles for axes, mauls, picks, hoes, adzes, knives and scrapers.

4. Paddles, papoose boards and canoe strips.

5. Pipe stems and flutes.

6. Drums of all styles.

7. Snow shoe frames and lacrosse sticks.

8. Mortars and pestles.

9. Birch and other bark baskets and containers.

10. Methods of woodworking. Felling trees by fire, making cavities by charring and gouging, and shaping by charring and scraping have long been popularly supposed to have been the common method of fabricating wooden articles. While there may be some basis in fact for the above theory, I believe most of the work was done with a good sharp stone axe, adze or scraper. Nearly every piece of flint from nearby villages shows in some manner the work of human hands. Practically every piece of flint or other hard stone that broke off with a sharp edge shows marks of usage. We find highly specialized specimens of knives, scrapers and drills, but ranging along between these type forms are hundreds of others. Any sharp-edged stone was a knife if the Indian needed a knife. It became a scraper if he was in need of such a tool. I believe a flint hoe was an adze, a hoe or a weapon as occasion demanded. A piece of flint securely fastened to a handle becomes a very efficient tool.

a. Riving and splitting. Indians did manage to split out long thin strips for their canoe ribs and gunwales, paddles, cradle boards, snowshoe frames and many other things. I

have not found stones that show signs of ever having been used as a wedge, neither have I seen any copper implement that had the battered appearance of a wedge.

The splints for baskets were prepared by pounding an ash log with a maul till the growth rings separated from each other. They were then peeled off and trimmed to the right width.

b. Bending. Ribs for canoes, papoose cradles, bows for snowshoes, toboggans, basket handles, and lacrosse sticks were made of bent wood. Somewhere the Indian learned to bend wood by softening the grain, making his bend, and then drying to shape.

c. Drilling. First explorers found pipes of drilled stone; we have a right to suppose they drilled wood.

B. Drills. These beautiful, long, slender flint drills must have been made to use on wood. The points do not show they were ever used on stone. They are nearly always broken when found. Drilling a deep hole with a fragile drill, even a steel drill, requires great care to prevent snapping the tool. The ends of the thwarts of canoes, papoose cradles and many other articles had holes thru them where they were fastened together by cords or thongs.

C. Glueing. Pipestems and flutes were made by splitting a stick, gouging a hollow down thru the center of each portion and then glueing the pieces together. Feathers were fastened to arrow shafts with glue. Our river Indians prepared their glue from the air bladder of sturgeon.

D. Pitch and gums. The Indians early learned to put grease in pitch to keep it from cracking. They used it on the joints of canoes, bark mococks and buckets.

All Indians had a wonderful knowledge of the adaptability of the different kinds of woods for the use intended.

E. Stone working.

There is a side to this problem that is seldom considered. Thanks to former relic hunters who saw only the spectacular and left all the rest, we are able to find a great deal of material that helps us in our study of the human side of these people. From the number of hammer stones and the battered appearance of many we may judge they were handy tools. If we take a stone and use it for pecking or crumbling

on a flat surface, such as the blade of a stone axe, it takes on a certain appearance. An Indian hammer stone having a similar appearance was without question used for a like purpose. In the same way we can pick out such as were used for making arrow points, or other reworked flint artifacts, and to a less certain degree other processes. Lap stones very much indented and battered show that the Indian used an anvil.

Pieces of sandstone show on a side or edge or both that they have been ground smooth. Use any piece of sandstone for grinding on a harder stone and soon you will have a surface that resembles the Indians' abrading stone. The surface must be kept wet or the abrading stone will "clog up." This is also true in drilling in stone with a stone drill.

Chert pecking stones are quite rare. Why this should be so when they do the work about twice as fast as other stone I cannot explain.

A quite rare type of artifact is made in the shape of a barbed arrow but having one side perfectly flat. We call them turtle backs. Another tool is spud-like but has a distinct upward turn on the round cutting edge. There are dozens of other modifications of the scraping or cutting tool which do not fit any classification but which did the work for those housekeepers or artisans of old.

F. Copper. Prehistoric implements of copper are so familiar that it would be a mere waste of time to cover that ground.

G. Bone, antler and shell: (1) awls and so-called daggers; (2) flakers, chippers and pottery decorators; (3) barbed spears; (4) teeth for flakers and ornaments; (5) game counters and ornaments; (6) spoons.

H. Weaving and plaiting.

1. Cattail mats for wigwams. These mats were not woven on a loom but the warp was inserted thru the weft elements with a long needle or bone.

2. Floor mats of bulrush were woven in a similar manner except that the thumb was used to part the rushes for the warp. Both cattails and bulrushes were boiled till all the sap was removed and the fibers toughened.

3. Baskets of wood splints, grass and twigs.

4. Snow shoes; woven with a single thong passed from one side to the other.

5. Squaw bags were woven from bark, roots and other fibers.

I. Sewing.

1. Thread, twine and cordage.

- a. Inner bark of willow, basswood and slippery elm.
- b. Fibrous roots and moosewood.
- c. Thongs cut from tanned hides and from rawhide.
- d. Sinew from a deer's back.

2. Awls, of copper, bone and antler, flint or thorns.

3. Needles. Small needles were unknown before the advent of the white man. The few crude-eyed copper needles now in museum cases are insufficient proof of the general use of this type of artifact. Curved needles with a round hole drilled near the middle were made from a split rib and used to make mats.

Porcupine quills were said to have been used in a manner similar to that of a shoemaker attaching a bristle to his waxend.

Sinew must be moistened before use. The most convenient means of keeping the thread moist was to hold it in the mouth with the unmoistened end sticking out. This hard end could be very readily poked thru an awl hole and the stitches made with considerable speed.

Garments, moccasins, ornaments and decorations, birch bark utensils, canoes and a host of other things were sewed together.

J. Pottery.

With the development of pottery ancient man arose from a mere animal existence to a remarkably high standard of living. Boiled food, soups and gruels were added to his fare. The inhabitants of this locality appear to have been plentifully supplied with serviceable vessels. Many of the pieces were of pleasing design and were often artistically decorated. They had small cups and bowls and other vessels of varying sizes up to great pots that would hold several gallons.

The cooking pots had a rounded or a somewhat pointed bottom. We find holes that have layers of ash and charcoal

in the bottom. It is generally conceded that cooking was done by placing the pot in a firehole over a bed of coals. I have often wondered what they used for a pot cover. I think we have abundant proof that the old Yankee bean hole was an adoption and not an invention. I wonder if the New England clambake was not also borrowed from the aborigines. Hominy, samp and hulled corn are other examples of Indian cookery that cannot be improved upon.

Pottery, pipes, beads and ornaments are found. There are no duplicates in design or decoration.

The squaw of old must have experienced a heap of satisfaction from her dishes that is not shared by the housewife of today. If she were showing off her pottery to the other members of the sewing circle, she could be certain no other old squaw would bob up and say "Why! I had one just like that, but I gave it to the washwoman."

K. Tanning. Hides and skins do not keep over summer on account of "grease burn". Bugs and insects take their toll of furs and robes unless prepared by tanning. Indians were very skillful tanners. A part of their process required the use of scrapers. A very large number of flint scrapers of different sizes were used, but all had one end rounded off from a flat side making a cutting edge. I have been told that some of our most skillful tanners of today use an exactly similar tool, and Dr. M. R. Gilmore is quoted⁴² as having seen this type of implement so used by the Sioux.

V. COMMERCE.

Evidence of commercial intercourse is seen in the numerous artifacts of kinds of stone not native to this section: quartzite, rhyolite, quartz, blue flint, painted flint, flint from Flint Ridge, chalcedony, obsidian, hematite, catlinite, slate, steatite and greenstone. Copper was obtained from the region near Lake Superior; sea shells from the coast. All this implies that something must have been given in trade. What did they have that was desirable to exchange? We have no right to assume that all this interchange was brought about by war or conquest.

VI. MEDICINE. The researches of Huron Smith and many other workers among four different tribes have shown

⁴² McKern, W. C., personal communication.

that they not only had a very wide knowledge of the medicinal value of plants and herbs but that this knowledge has been handed down from the remote past. The Indian made long journeys to collect plants which had some special virtue as medicine. Medicine Brook, in Marinette County, takes its name from the fact that Indians every summer made pilgrimages to that locality to "gather medicine".

VII. DIVISION OF LABOR. In the highly specialized and elaborately wrought artifacts and the beautiful decorations on the pottery the hand of the artist or master craftsman is seen. This points to a division of labor not attainable where the work was merely passed on to the squaws and old men.

VIII. RELIGION. The remains left by prehistoric people easily lead the casual observer to believe them to have been idolators. They built effigy mounds. History records their belief in the Great Spirit, a supreme being. Their concept of a future life in another place, The Happy Hunting Ground, was to them an absolute certainty.

The Indian buried his dead in consecrated ground. Grande Butte des Morts, Mas-pah-que-te-noh-tah, the big mound, or hill, of the dead, has long been revered as sacred ground by the Indians. Here the dead were laid to rest. All who died away from the home village were brought back and interred with fitting ceremony. If circumstances prevented bringing the body home the same season the demise occurred, the remains were safeguarded till the bones could be returned to rest with those of their fathers. This was the bundle burial. It is owing to the custom of burying a man's choicest possessions with him, for use in his future abode, that we are indebted for much of our knowledge of the past.

The effigy mound is no more an evidence of idolatry than is the Masonic Temple, the Elks Club or the Moose Hall. The Indian built a mound to represent the animal, bird or spirit which possessed some superior quality which he was bound by his sectarian ties to emulate. His fraternal organization was a part of his religion. He hit on a scheme that the white man has missed; he takes his wife along to lodge meeting. There is no later discussion in the wigwam regarding his whereabouts on the night in question.

An Indian will not deliberately lie, but he can be mighty indefinite.

We must go back five hundred years in our own civilization when we compare the life story of these people with that of the whites. We will find that the great majority of white people worked harder and had less variety in their fare. Lacking tools that would take off a chip or a shaving, the Indian used a scraper and an abrading stone. He accomplished results that were substantial and satisfactory, when the time element was not considered.

In Conclusion: The Indian (1) lived on a balanced ration of cooked food; (2) he was warmly clad in tanned furs and skins; (3) he lived in warm dry wigwams; (4) working with the crudest tools he was able to accomplish results that were substantial and often of real artistic merit; (5) he traded with his neighbors; (6) he was religious; (7) when the necessities of life were abundant he had opportunity to cultivate his artistic side and enjoy recreations; (8) above all, he was not an object to be pitied.

These people, who were as yet innocent of the baneful effects of the by-products of white man's so-called civilization, met and solved the problems of the great struggle for existence in a manner which should give them a place among the favored of GOD'S Children.

RECORD SUGGESTIONS FOR THE ARCHAEOLOGIST

Wilton E. Erdman

Business accounting has been scientifically and successfully applied to most commercial enterprises. Few people, however, have put much thought to devising means for lessening the labors involved in recording other human endeavors and activities. In commerce, accounting is the analysis and interpretation of commercial records and the creation of systems, as well as the insistence of mathematical exactness in bookkeeping procedure. A business man should know how his establishment is progressing from month to month to prevent mistakes and loss of time, money, material, and labor due to changes in economic conditions and mismanagement. To bring about efficiency in merchandising, production, management, and finance policies, records have been well standardized for the bookkeeper relative to mechanical details. Generally, the desire to acquire knowledge means the necessity of records; the introduction of records brings routine; and routine means irksome labor, unless results can be obtained through the minimum of effort. Why cannot some of the principles and practices of business accounting, therefore, be transferred to the field of archaeology? Naturally, the mathematical element would be missing, but the columnar form of most journals—books of original entry—can be used to advantage.

As an amateur in accounting, as well as in archaeology, the forms presented are humbly submitted for the approval of my colleagues. Once a thought is conceived, it can be rectified, improved, or enlarged upon by the conditions, by experience, or by the specific tastes of each individual. In the forms shown, a collector is undoubtedly confronted at all times with the fundamental information that will make his finds of value and interesting. Additional columns with other headings or changes can be made to suit the inclinations of the student.

In devising any form, the two following points are probably of paramount importance:

1. *What facts are wanted* or what information is desired?
2. *How shall those facts be named and grouped* to make the best possible headings and arrangement for entry purposes?

COLUMNAR FORM FOR ARCHAEOLOGICAL RECORD BOOK

Relative to the facts for an *Archaeological Record Book*, the following six major questions can be asked:

1. *What* was found? (Item)
2. *When* was it found? (Date)
3. *Where* was it found? (Location)
4. *Who* found it? (Finder)
5. *Who* has it? (Owner)
6. *What are the present conditions* surrounding the find and *what were the prehistoric circumstances*, if possible?

The meaning of each columnar-heading selected for the form, using the questions as a basis, is quite obvious. *No.* stands for the numerical order of the entries and the specimens are numbered with india ink when listed in the record. *Date* means the calendar time that the artifact was found. *Item* means the type of artifact found i. e., drill, ax, knife, and so forth. *Material* refers to the composition of the find, for example, quartz, chalcedony, jasper, chert, deer horn, copper, etc.; here, we sometimes require the assistance of the petrologist, chemist, mineralogist, anthropologist, zoologist, geologist, and other specialists to help us determine the definite nature of the evidence.

For the general heading of *Location*, the geographical designations of *Township*, *County*, and *State* places the site roughly in mind. The *Surveyor's Key* provides horizontal and vertical comparisons through the numbering of township and range lines, as well as denoting location. The *Section No.* column, however, numbering 1 to 36 and only one square mile in area, places the site definitely in mind because of the small territory covered. To make the position of the sites even more lucid, sections should be subdivided and listed as N. E. $\frac{1}{4}$, N. W. $\frac{1}{4}$, S. E. $\frac{1}{4}$, or S. W. $\frac{1}{4}$, whenever possible, for a spot on 160 acres is more easy to locate than a site on 640 acres,—the area of a section.

Listing the *Owner of Site* under a separate column probably proves more advantageous to the present than it does to the future. Due to the frequent changes in proprietorship, the significance of having the owner's name on the record is lost. One hundred years from now, people will not know who owned "such and such" a piece of land—although laborious research delving into records might supply the information.

Listing nicknames of sites under *Name of Site* frequently gives an immediate understanding as to exact location. This proves particularly useful if a stranger wants to view a site; if he asks a local resident about "Quick's Point", the resident can generally inform him where it is. Besides, nicknames seem to linger over some localities for centuries, passing by word of mouth from generation to generation. Such perpetuation gives them a decided value.

The heading *Kind of Site* means the probable use to which the site was put, such as, campsite, workshop site, village site, battlefield, cemetery, mound, hunting site, refuse pit, etc. The bits of evidence picked up on the field will provide means for making deductions. Potsherds usually indicate a campsite while an abundance of stone chips and flakes invariably indicates a workshop site. In determining the kind of site, the natural surroundings must be taken into consideration; for example, artifacts found near a spring may indicate a hunting site. Sometimes, it is difficult to put a site completely into one category because evidence inclines one to believe that it may have served several purposes. If that is the case, all probable purposes should be listed.

Special physical features and formations should be listed under the heading *Topography*. Rivers, lakes, moraines, slopes, kettles, gravel pits, marshes, springs, ravines, outwash plains, etc., are well to have in mind when deciding sites and marking locations. In providing the necessities of life—food, clothing and shelter—for himself, family, and tribe, the Indian had to select profitable locations. Hills on the leeward side of some lake or stream proved good camping grounds by giving shelter. Lakes with abundant fish, forests inhabited with edible animals, and fertile spots for agriculture were all considered by the Indian because they provided food. Springs furnished the best drinking water.

Woods furnished clothing as well as food because the furs and skins of animals living there could be utilized for garments. Rivers and lakes also provided transportation for canoes made from the bark or wood of trees. The topography and vegetation of the land, therefore, had much to do in determining the use of a certain space.

As the United States Geological Survey has not completely mapped all the townships in Wisconsin, the student is often handicapped in recording his sites. The topography shown by the contour lines is a distinct advantage to the research worker because he can at once mark his spots. The ability of county officials to supply adequate information depends entirely upon the amount of surveying done by that particular county. In most cases, the material available from them is meagre, and the student must rely upon his own skill in producing a presentable map.

Historical data of the site enlarges the powers of one's mind to picture the activities that once took place on the area being covered. The last tribe inhabiting the region under observation or the sequence of tribal control, where ascertainable, together with the artifacts found, might prove a great deal in establishing cultures. Concentration to definite areas is desirable in archaeological research; yet, where one's studies are varied and scattered, historical data is necessary to prevent confusion.

Map No. refers to the number of the map on which the site pertaining to the item found is marked. If a separate division for maps in the rear of the loose-leaf record is created, they will be easily accessible for reference, comparison, and additions.

Site No. is the specific number of the field on which implements were found. As new sites are found, they should be given numbers and marked on the map covering that region.

By Whom Found establishes the identity of the finder. This is important if it is necessary to verify or additional information is wanted. Many times the one who finds the artifact is not the one who has possession of it.

By Whom Owned establishes the identity of the owner. Purchases, gifts, or personal finds, moreover, are easily re-

corded and their disposal at any time by a sale can also be shown with a notation.

Remarks can show all miscellaneous information that might be considered important relative to the find.

Another thing to remember is that there should be temporary tabulations in the field as the specimens are found. Envelopes, bags, and boxes will serve the purpose of collecting mediums and upon these can be written the noteworthy points or salient features to be later on duly recorded in the entry book. The ideal method is to have the sites listed for reference and make entries in the record from the field notes at the end of the day. One's memory should not be depended upon because it is too easy to forget. Once a record has been devised and the specimens have been marked numerically with india ink, the data means something to the professional investigator and research worker.

The resourceful detective to-day collects all the clues upon the scene of any crime or mystery. With these bits of evidence, he builds up a chain of testimony to solve his problem. Just as the detective operates, so the professional archaeologist works in solving prehistoric life. The Indians and aborigines have left many clues scattered over thousands of square miles of territory that need to be gathered, recorded, analyzed, and interpreted. The amateur can help gather and record such clues as come his way and then turn his findings over to the specialist to analyze and interpret. In this way, a chain of testimony can likewise be constructed to give us solutions to our many queries.

If a standardized form could be adopted by all private collectors, it would greatly assist museum staffs and societies engaged in studying antiquities by segregating material and information for them in definite form. Data could be more easily compiled and future researches would be probably more effective due to the ease of going through many records. Without a doubt, much hidden material would also be brought to light.

COMPARATIVE COLUMNAR FORM FOR NOTES ON INDIAN TRIBES

In writing down notes from reading and in making comparisons, such a form as listed above might be of value in quoting excerpts or registering sources of information. In

theory this form may seem of more value than it might be in practice. The amount of detail involved for the space allotted to each heading, moreover, might be too great for a thorough use of the columnar form. It is submitted primarily as a suggestion for the organization of material. The author frankly admits the labor and limitations involved in filling out such a form accurately and completely.

In regard to forms, one thing should be kept in mind concerning the facts that are wanted and the acquisition of such facts. It is easier to know what knowledge is wanted than to secure that knowledge; in a like manner, it is easier to ask a question than to answer it. Sometimes years, decades, and even centuries of labor and thought are required to provide what is wanted. The headings in the columnar form for tribal comparisons are in reality a tabulation of facts that are wanted, and the acquisition of data under some of the headings is difficult in certain cases because much work still has to be done in many fields of research.

Since ignorance means an absence of knowledge and failure is the result of ignorance, we are failures in the field of archaeology because we are ignorant—unwillingly so—of the truth and facts. If we knew precisely how life originated, developed, and spread to all corners of the earth and had an accurate account of the history of the past, we would not ponder as we do on such puzzling pre-historic problems, theories, and suppositions. As science, in its progress, unfolds the truth and facts of this universe, we shall become more intelligent, sensible, and wise; yet, some of the riddles may never be solved or answered. On the other hand, it is possibly better that we do not know all and are at least partially ignorant because a quest for knowledge adds a spice to life.

Regarding the divisions of the various stocks, tribes, and tribal branches, linguists have compiled some interesting and convincing material showing the relationship of most known groups. Without a doubt, however, certain re-classifications will occur due to further studies in the science of philology amongst the Indians. Tribal history, tradition, characteristics, and culture should also be examined as well as language for a final determination of ties that link a tribe with others.

Since the Wisconsin student will probably confine most of his efforts to the Winnebago, Menominee, Sioux or Dakota, Sac, Fox, Chippewa or Ojibway, Shawnee, Potawatomi—forest and prairie (Mascoutens)—,and possibly some of the Iroquois tribes transferred to Wisconsin reservations, the columnar form might prove exceptionally advantageous. When hundreds of tribes are considered, it is apt to become unwieldy in the maze of detail unless a fixed purpose is kept in mind.

*ADDITIONAL EXPLANATIONS PERTAINING TO
COMPARATIVE COLUMNAR FORM FOR NOTES
ON MOUNDS AND EXCAVATIONS*

The comparative columnar form for notes on mounds and excavations might be advantageous in making summaries of a site with many mounds or making summaries of all mounds known to exist in a given region. Most of the headings chosen are self-explanatory. To make myself more clear on one or two, I might, however, say the following:

Location—Human—Burial. Mention should be made of:

A. *Compass direction* body is buried i. e., is body placed in N. to S., E. to W., N. W. to S. E., or N. E. to S. W. position?

B. *Horizontal position of body*⁴³ (Placement of the body relative to the shape of the mound)

1. Shoulder
2. Near major axis of body
3. Hip
4. Point equidistant between shoulder and hip
5. Heart
6. Head

C. *Vertical position of body* (Depth of interment)

1. Pit—below mound floor (Oval, round, or rectangular)
2. Mound floor
3. Above mound floor

⁴³ McKern, W. C., Kletzien & Nitschke Mound Groups, Mil. Publ. Mus. Bull. Vol. 3, no. 4, p. 448.

Type—Human—Burial. Are burials:

1. Flesh
 - a. Extended (Side, back, or face down)
 - b. Flexed
 - c. Sitting (rare)
 - d. Standing (rare)
2. Bundle
3. Cremated?

Also, are burials inclusive or intrusive?

Ceremonial Evidences i. e., existence of altars (earthen or stone) or refuse heaps indicating some rites, religious or otherwise.

If any photographs are taken, they can be numbered and the number applicable to the burial indicated in the reference column.

CONCLUSION

Once a form has been decided upon, copies can be made with the mimeograph, ditto, or other duplicating machine.

The author does not claim that any of the forms shown are perfect because improvements in terminology and groupings can perhaps be made. Such forms as are shown, however, are given to illustrate the advantages of organized reasoning, study, and reference facilities derived from columnar groupings. Available facts coming to our attention over a long period of years are, thereby, at once accessible and, we have a review or complete picture of previous topics covered.

Suggestions for improvement and criticism on this phase of archaeology are kindly solicited.

ARCHEOLOGICAL NOTES

Meetings

January 18, 1932. President Charles G. Schoewe presided at this meeting. There were forty members and visitors present.

It was announced that at the Executive Board meeting, held earlier in the evening, there had been elected as annual members Arden E. Sheldon, Oshkosh, and Burton Kannenburg, Milwaukee. The proposed preservation of a group of three Indian mounds in the Upper Mississippi River region, in Fountain City Bay State Park, was made known. These mounds had been mutilated by relic hunters but could be restored and should be marked with a tablet. This the State Conservation Commission would be asked to do when this new state park area was formally accepted by the State. The first number on the program of the evening meeting was an address by Mr. George S. Overton of Butte des Morts on the subject of "Reconstructing the Prehistoric Life of Winnebago County". Mr. Overton, an archeological investigator with years of experience, had taken up the work of completing and continuing the archeological survey of his home county begun years ago by the late Hon. Publius V. Lawson of Menasha, a former leading member of the Wisconsin Archeological Society. Mr. Overton told of his own researches in a very interesting way and in detail.

Mr. Robert P. Ferry of Lake Mills spoke on "Aztalan," recounting the history of the discovery of this important prehistoric enclosure, and told other interesting facts concerning it. Both addresses were discussed by various members in attendance at the meeting. Mr. Theodore T. Brown of the Neville Public Museum, Green Bay, presented an account of some of the results of field work in Brown and adjoining counties.

At the close of the meeting specimens of Indian stone implements were exhibited by several of the members present and their interest briefly discussed by President Schoewe.

It was announced that this was the one hundredth anniversary year of the Black Hawk War, a sanguinary conflict which began in April 1832 between the Sauk Indians under Black Hawk and the pioneer settlers of southern Wisconsin and northern Illinois.

February 15, 1932. President Charles G. Schoewe in the chair. There were fifty members and visitors in attendance. Secretary Brown announced the election of Paul Boehland, Milwaukee, and Kurt M. Bleck, Beaver Dam, as annual members. The President had appointed as a nominating committee to nominate officers for the ensuing year Messrs. Barrett, West and Richter. They would report at the March meeting of the Society. Members were requested to prepare papers to be presented at the Joint Meeting to be held with the Wisconsin Academy of Sciences, Arts and Letters at Milwaukee, on April 8 and 9.

This being the George Washington Bicentennial year, a Washington program was presented. The speaker was Rev. James Henry Lee of Wauwatosa, who delivered an inspiring address on "George Washington". Dr. Herbert W. Kuhm supplemented this address with an interesting paper on "The Indians of George Washington's State." Both the address and the paper were discussed by some of the members in attendance.

At the close of the meeting exhibits of Indian implements and other specimens were made by C. G. Schoewe, Paul Joers and C. E. Brown.

March 21, 1932. The Annual Meeting of The Wisconsin Archeological Society was held in the auditorium of the Milwaukee Public Museum, President Schoewe presiding. There were three hundred members and visitors present. The Secretary announced the election of Hugo Haring, Milwaukee, as an annual member, and the death of Edward D. Payne, of Springfield, Illinois, a life member.

As chairman of the nominating committee, Dr. Barrett submitted the following report:

REPORT OF THE NOMINATING COMMITTEE OF THE WISCONSIN ARCHEOLOGICAL SOCIETY

To the president of the Wisconsin Archeological Society:

Your committee wishes to report that it has carefully considered the matter of nominations for the ensuing year, and that in the course of these deliberations there arose a question as to legal composition of the officary of the Society. Upon referring to the "Articles of Incorporation" as published in the Wisconsin Archeologist (Vol. 13, No. 2, pp. 108-110) and to the Society's "By-laws" (Same reference pp. 111, 112), and to an amendment to the same entitled "Amendment to the Articles of Incorporation of the Wisconsin Archeological Society" dated March, 1904, the same being recorded in the office of the Recorder of the County of Milwaukee on May 7, 1904, these records appearing in Vol. T. P. 220, 221, 222, it was ascertained that the following procedure is mandatory in accordance with the wording of Article Four, which reads as follows:

"Fourth: The general officers of said corporation shall be a President, five Vice-Presidents, a Secretary and a Treasurer, and a Board of ten Directors, from among which number of Directors shall be elected the foregoing named officers and which Board of Directors shall constitute the Executive Board: These officers and directors shall be elected by ballot at each regular annual meeting of the Society, each of which shall hold his office for one year and until his successor be elected and qualified."

From the foregoing article, which is obviously the legal authority under which the election of officers in this society must proceed, it appears that we are bound and limited in our action as a committee on nominations to propose for election at this time a total of ten individuals all told.

We therefore unanimously nominate the following:

For President, Mr. W. C. McKern

First Vice-President, Dr. A. L. Kastner

Second Vice-President, Mr. W. W. Gilman

Third Vice-President, Mr. R. J. Kieckhefer

Fourth Vice-President, Dr. H. W. Kuhm

Fifth Vice-President, Rev. F. S. Dayton

Treasurer, Mr. G. M. Thorne

Secretary, Mr. Charles E. Brown

For Directors: The above named eight persons and also

Mr. Charles G. Schoewe

Mr. George A. West.

Respectfully Submitted

S. A. Barrett

Geo. A. West

E. F. Richter

Milwaukee, Wis.,
March 21, 1932.

Committee on Nominations

On the motion of Dr. H. W. Kuhm this report was accepted and these officers were elected.

Dr. Barrett introduced the following resolution, prepared by Mr. West:

Milwaukee, Wis.,
March 21, 1932.

WHEREAS, it is thought desirable that the Wisconsin Archeological Society form and elect an Advisory Council, consisting of twenty (20) members, in order that their advice may be available in the advancement and broadening of the objects for which it was organized.

NOW THEREFORE BE IT RESOLVED that the Wisconsin Archeological Society, hereby, establish an Advisory Council, consisting of twenty (20) of its members, to be elected at its annual meeting by and from the members of this Association,—each of such members to hold the position for the term of one year or until a successor is elected.

Any nominating committee, appointed by the President of this Society for the purpose of nominating directors and officers, shall at the same time suggest nominations for members of the Advisory Council.

The duties of such Advisory Council shall be to meet with the Board of Directors, when convenient, and to consider and advise on all questions that may come before such Board. However, members of such Advisory Council shall not be entitled to vote on any questions under consideration.

This resolution was adopted on the motion of Dr. Barrett. The nominating committee then submitted a supplement to its first report, as follows:

SUPPLEMENT TO THE REPORT OF THE NOMINATING COMMITTEE

To the President of the Wisconsin Archeological Society:

In the course of its deliberations your Nominating Committee has found that in accordance with the legal procedure imposed upon the Society by its Articles of Incorporation, we are obliged to reduce the officary of the Society to a total of ten persons, in whom is vested the power of governing the destinies of the Society for the year and who alone are privileged to vote on questions before the Executive Board so constituted.

As a matter of fact for some years past, through some misunderstanding concerning these Articles of Incorporation, a somewhat larger Board had actually been serving the Society, some for a considerable number of years. Through these years of service and the experience thus gained they have been of much benefit to the Society and we feel that the Society should continue to profit by their good advice and counsel. Further there are many other members of the Society whose wise counsel might prove very beneficial to the members of the Executive Board in their deliberations.

As members of this ADVISORY COUNCIL we unanimously nominate the following:

Mr. Joseph Ringeisen, Jr.
Dr. E. J. W. Notz
Mr. Huron H. Smith
Mr. A. P. Kannenberg
Mr. Gustav R. Zilish
Mr. Towne L. Miller
Miss Marie Kohler
Mrs. A. C. Neville
Mrs. Theodore Koerner
Mr. Paul Joers

Mr. E. F. Richter
Mr. Geo. S. Overton
Prof. A. H. Sanford
Rev. Paul B. Jenkins
Dr. Ralph Linton
Mr. Theodore Brown
Dr. S. A. Barrett
Dr. Orin Thompson
Mr. Aden T. Newman
Col. Marshall Cousins

Respectfully submitted,
Nominating Committee.

These nominees were then elected to the Advisory Council.

Treasurer Thorne read his annual report. On the motion of Dr. Barrett the President appointed an auditing committee consisting of the Messrs. E. R. Richter and T. L. Miller and Mrs. Theodore Koerner to audit the Treasurer's accounts.

Mr. George A. West, the speaker of the evening, delivered an illustrated lecture on "Historic Places and Beauty Spots" in which he described the regions visited by the various Milwaukee Public Museum expeditions in the Southwest. It was a most interesting lecture, illustrated with fine colored lantern slides and was greatly appreciated by the large audience of members and visitors.

At the close of the meeting Mr. N. E. Carter, of Elkhorn, exhibited to the members an exceptionally fine collection of Wisconsin and other Indian pipes, ornaments and ceremonial objects.

April 8 and 9, 1932. The annual Joint Meeting of the Wisconsin Academy of Sciences, Arts and Letters, The Wisconsin Archeological Society and The Midwest Museums Conference was held at the Milwaukee Public Museum. Five sectional meetings of Sections A and B were held, two of these convening in the lecture room in the Milwaukee Public Library, and three in the trustees room in the Museum. Mr. Alton K. Fisher presided over the morning session and Mr. W. C. McKern over the afternoon session of Section A in the Library lecture room on April 8. Mr. Charles E. Brown presided at the Saturday, April 9, forenoon session of Sections A and B in the Museum trustees room, the final meeting of the Joint Meeting. Members of the Wisconsin Archeological Society who presented papers in the several programs were John B. MacHarg, A. K. Fisher, John G. Gregory, C. E. Brown, Theodore T. Brown, Dr. Anton Sohrweide, Geo. S. Overton, Albert M. Fuller, Rachel M. Campbell and Dr. Ira Edwards. Rev. O. W. Smith delivered an illustrated lecture on "High Mountains" at a general session held in the Museum auditorium on Friday afternoon. Many members and their ladies attended the Academy dinner held on the evening of the same day in the Pere Marquette room, Hotel Schroeder. After the dinner Prof. Rufus M. Bagge of Lawrence College gave an illustrated lecture in the Museum Auditorium on "Yesterday and Today", a lecture based on several months of travel in South America. About 130 members of the three participating societies were registered at the Joint Meeting.

The Central Section, American Anthropological Association, held its annual meeting at Ann Arbor, Michigan, on Thursday and Friday, March 17-18, 1932. President Henry Field conducted the morning and afternoon sessions which were held in the Natural Science building on the University of Michigan campus. Among the seventeen papers offered in the program especially appreciated were those offered by Dr. Gerhardt Von Bonin, Dr. Robert Redfield, Dr. A. R. Radcliffe-Brown, Dr. Melvin R. Gilmore, Dr. Paul S. Martin and Dr. Wilfrid D. Hambly. Dr. Robert R. Lowie gave a lecture on "The Family as a Social Unit" in the auditorium. After the dinner on Thursday evening, Dr. A. H. Romer of the University of Chicago, gave an illustrated address on "Fossil Animals in Relation to the Appearance of Man in North America." Dr. Milton J. Herskovitz was elected president of the section. Mr. George R. Fox was re-elected secretary-treasurer.

Field Work

A report has come in that Messrs. George Pasco and Walter S. Dunsmoor, while investigating a site in Green Lake County, have discovered four pottery vessels. Two of these specimens, illustrating the Lake Michigan type of ware, are intact. A Grand River type of vessel is sufficiently represented by sherds to permit complete restora-

tion. The fourth specimen consists of about one-half of a good sized grit-tempered pot equipped with distantly spaced points about the rim, a type that has inaccurately been described as "Iroquois". This is one of the greatest pottery finds made in Wisconsin in recent years. All associated data were secured and this accession of new pottery materials should prove of great value to local students of archeology.

WISCONSIN ARCHEOLOGISTS! What happens to the records of your field investigations? Do any other than your closest friends ever hear about your discoveries, surveys and other accomplishments? If not, perhaps it is because you fail to send in your reports to the Archeologist. This publication is your official organ and is the medium through which your investigations may be made known to other interested students in your Society. Remember this when you enter the field this summer. Keep adequate notes of your efforts and successes and send them either to Mr. Towne L. Miller, chairman of the survey committee, or to Dr. Ira Edwards, editor of the Archeologist, Milwaukee Public Museum. Copies should also be sent to Secretary Charles E. Brown, State Historical Museum, Madison, to be filed with the permanent records of the Society. **INSIST** upon seeing full announcement of your activities in the Archeologist.

Recent Deaths

Mrs. Babina M. Dengel, a life member of the Wisconsin Archeological Society, died on Saturday, April 9, at her home at Madison. She was eighty-eight years old at the time of her death. Her girlhood home was in Switzerland. She had been a member of the Society for the past twenty years. She possessed a collection of Indian implements some of the pieces of which were collected from a homestead formerly owned by her on the shore of Lake Mendota at Madison.

Personals

Dr. Anton T. Sohrweide, after a brief vacation spent at his home at Watertown, Wisconsin, has returned to his medical duties at the C & O Hospital at Clifton Forge, Virginia. In Virginia Dr. Sohrweide has been engaged in locating some local Indian sites.

At the Joint Meeting recently held at Milwaukee Miss Rachel Mary Campbell of that city gave a talk on "Wisconsin Historical Biographies." Miss Campbell has been for a year or more engaged in the preparation of a series of biographies of noted men and women of this state. Each completed biography is accompanied by a large-size photograph of its subject, and is filed in the archives of the Wisconsin Historical Society. In connection with her talk biographies of Dr. Increase A. Lapham, Dr. Stephen M. Babcock, Dr. Louise P. Kellogg, Dr. G. W. Henika, George A. West and others were exhibited in two wall cases at the entrance of the Milwaukee Museum. These attracted great attention.

At the above mentioned meeting, Alton K. Fisher of the Milwaukee Museum was elected president of the Midwest Museums Conference, succeeding in this office Director Nile C. Behncke of the Oshkosh Public Museum, Gilbert O. Raasch of Madison succeeded Mrs. May L. Bauchle, Beloit, as secretary. In the near future it is hoped that the above organization may be combined with the Michigan-Indiana-Ohio Museums Association in a strong Middle West museums association.

A recent visitor in Wisconsin was Mr. Harold O. Barton, director of the widely known Chamberlain Memorial Museum at Three Oaks, Michigan. Mr. Barton is a University of Wisconsin alumnus. He succeeded Mr. George R. Fox as director of the museum and its outdoor

parks, the Warren Dunes, Warren Forest and Warren Beach, on his retirement a year ago. Mr. Fox is the director of a large boy's camp at Manitou Island, Lake Huron.

In a paper on Wisconsin hobbyists, read at the Joint Meeting, Miss Lorraine C. Brown estimated the number of persons in the state more or less actively engaged in the collection of Indian implements at about five thousand. In their number these are exceeded only by the collectors of postage stamps whose number is eight thousand.

In locating and mapping Indian camp and village sites in Sauk County for the state records of the Wisconsin Archeological Society, Mr. Milton F. Hulburt of Reedsburg is doing a very careful and painstaking piece of work. His work well supplements that of locating and surveying the groups of Indian mounds, performed some years ago by the Messrs. Dr. Arlow B. Stout and Harry E. Cole.

Miscellaneous

Do you always agree with everything you read in this publication? If not, why not state your opinions on the matter and send them in to the Archeologist to be published in a new "Correspondence" column, which the editors expect to inaugurate in the next issue? Archeology, like any other science, can not exist as a vital, growing field of activity without constructive criticism and controversy. What are your archeological convictions? Have you any? Then let us hear from you.

The editors.

ATTENTION! Members of the newly appointed Advisory Council. You can only function as council members by attending the regular meetings of the board of Directors. There you have a voice on all matters considered, and the best interests of the Society depend upon your exercising your advisory privileges to the fullest extent. The weight of an opinion shared by a majority of the Council and expressed at the board meetings can not fail to influence the vote of the directors and, through them, the policies of the Society. The officers and directors need your advice and support. You will greatly benefit the Society and aid in upholding its best interests by your active presence.

W. C. McKern, President.

Publications

The January-July issue of the Green Bay Historical Bulletin is devoted to a paper on "The Arndt Stout Roof-Tree", being a well-written account of the life of Judge John Penn Arndt who came to Wisconsin Territory in 1824 from Mackinac Island with his family. The Bulletin is published by the Brown County Historical Society. Mr. Theodore T. Brown, director of the Neville Public Museum, Green Bay, is its editor, succeeding the late Miss Deborah B. Martin in this office.

The 1930 Year Book of the Milwaukee Public Museum contains profusely illustrated articles on: excavating Hopewell mounds in Wisconsin; the Mesa Verde National Park; the Lost City of Nevada; Gypsum Cave, Nevada; Salt Lake City; the Hoover Dam site; Yosemite Valley and the high Sierras; Pyramid Lake in Nevada; Florida; Hawaii; Wisconsin Indian place names; the study of physical man in Wisconsin; Aztalan pottery; Chinese lacquer; Winnebago dog myths. \$2.25.

The results of an expedition of archeological research conducted by S. A. Barrett and Alanson Skinner in 1919-21, are set forth in the Milwaukee Public Museum bulletin: Certain Mounds and Village Sites of Shawano and Oconto Counties, Wisconsin, Vol. 10, No. 5, 1932. \$1.50.

Mr. Geo. A. West is the author of a recent bulletin of the Milwaukee Public Museum: *Exceptional Prehistoric Copper Implements*, describing newly reported artifacts of unusual interest, and including a discussion of the erosion of prehistoric copper implements. Vol. 10, No. 4, 1932. \$.50.

The Denver Art Museum, Department of Indian Art, Frederic H. Douglas, curator, has printed three additional Indian leaflets bearing the titles "The Sioux or Dakota Nation", "The Grass House of the Wichita and Caddo", and "Indian Sand Painting (Tribes, Technic and Uses)". These leaflets are greatly valued by many students of Indian history and anthropology.

The January 1932 issue of *The Ohio Archaeological and Historical Quarterly*, published at Columbus, contains a paper by Guy-Harold Smith on "Washington's Camp Sites on the Ohio River." This presents an account of "Washington's journey into the interior of North America in 1770 in the interest of Virginia soldiers who fought in the Indian wars and had been promised western lands as a reward for their services. In the same issue, C. B. Galbreath contributes an article on "George Washington's Interest in the Ohio Country".

The Peabody Museum of American Archaeology and Ethnology, Harvard University, has published a monograph, "The Evolution of the Human Pelvis in Relation to the Mechanics of the Erect Posture", by Edward Reynolds. It is illustrated with plates and figures.

The College Art Association, New York, has issued a catalogue of the Exposition of Indian Tribal Arts, which was installed until recently at the Huntington Free Library in that city. In it are listed over 600 specimens of the costumes, ornaments, fabrics, basketry and pottery of many Indian tribes.

Mankind, the official journal of the Anthropological Society of New South Wales, issue of December, 1931, printed at Sydney, contains the proceedings of the society for the months of July to October, and some interesting papers and articles on a rock shelter at Lake Burrill, a Fijian Yaqona ceremony, an aboriginal midden at Quibray bay, charms and amulets, the Muckera stone, and the extinct Tasmanians.

A well-illustrated, detailed description of the basketry craft of Indians on the Klamath and Trinity rivers of northern California is the subject of a publication by Lila M. O'Neale: *Yurok-Karok Basket Weavers*, Univ. of Calif. Publ. in Amer. Archaeol. and Ethnol., Vol. 32, No. 1, 1932. Univ. of Cal. Press, Berkeley, California. \$4.50.

The Southeastern Yavapai, by E. W. Gifford, gives a complete sketch of the fundamental customs of a tribe of central Arizona Indians. Univ. of Calif. Publ. in Amer. Archaeol. and Ethnol., Vol. 29, No. 3, 1932. Univ. of Calif. Press, Berkeley, California, \$1.00.

The Northfork Mono, also by Mr. Gifford and published in the same series, Vol. 31, No. 2, 1932, describes the folkways of a tribe of Indians inhabiting the western slopes of the Sierra Nevada mountains in northern California. Univ. of Calif. Press, Berkeley, California. \$1.25.

Primitive concepts of disease, by Forest E. Clements, published in the same series as the two preceding papers, Vol. 32, No. 2, 1932, includes a general discussion of such concepts of cause for sickness as sorcery, taboo, disease-object intrusion, spirit intrusion and soul loss, and their occurrence and culture significance throughout the world. Univ. of Calif. Press, Berkeley, California. \$.75.

A thorough review of culture problems centering about the Patwin Indians of north central California is given in: *The Patwin and their Neighbors*, by A. L. Kroeber, Univ. of Calif. Publ. in Amer. Archaeol. and Ethnol., Vol. 29, No. 4, 1932. Univ. of Calif. Press, Berkeley, California. \$1.60.

In the same series as the preceeding papers, Vol. 33, No. 1, 1932, is: *The Western Kuksu Cult*, by E. M. Loeb, a description and technical discussion of a form of religious cult and ceremony shared by many Indian tribes over a large area centering in the Sacramento Valley of California. Univ. of Calif. Press, Berkeley, California. \$1.50.

The *American Anthropologist* for April-June, 1932 (Address Dr. Robert H. Lowie, National Research Council, 2101 Constitution Ave., Washington, D. C.), contains the following articles: *Kinship Terms and Cross-cousin Marriage of the Montagnais-Naskapi and the Cree*, A. Irving Hallowell; *The Science of Culture*, George Peter Murdock; *The Loom and its Prototypes*, Charles Amsden; *A Uintah Ute Bear Dance*, Julian H. Steward; *Origin and Development of the Burial Mound*, E. F. Greenman; *A General Mexican Inscription Combining Mexican and Maya Day Signs*, B. L. Whorf; *Ancient Wheat and Barley from Kish, Mesopotamia*, Henry Field; Miscellaneous articles by Hortense Powdermaker, Cora A. DuBois, Scudder Mekeel, Francis Densmore, Katharine Bartlett and Melvin R. Gilmore.

The Department of Middle American Research of Tulane University, New Orleans, has published a pamphlet describing its activities and aims. Sections of this publication are devoted to a consideration of its library and publications, research work, expeditions and collections. "Because of its geographical situation, New Orleans is the logical base for studying the countries immediately to the south of it."

The *Handbook of Ethnography*, by James G. Leyburn, provides an alphabetical list of the peoples of the world, together with their geographical locations, supplemented by a table of peoples arranged under the political divisions of the world. Yale University Press, New Haven, Conn. \$5.00.

The Wisconsin Archeologist

Vol. 11

July 1932
NEW SERIES

No. 4



PUBLISHED QUARTERLY BY THE
WISCONSIN ARCHEOLOGICAL SOCIETY
MILWAUKEE

WISCONSIN ARCHEOLOGICAL SOCIETY

The Society is a state department, receiving a part of its support from the state. Its funds are under state control. Its work is well and widely known. It has received the approval of leading American archeologists, who agree that it deserves the full support of all Wisconsin citizens interested in the state's archeological history.

The Society's activities comprise the location, recording, investigating and preservation of Wisconsin Indian remains, folklore and history, all of which are rapidly disappearing and must be recorded and saved immediately if ever.

Through its efforts many fine groups of Indian earthworks and other aboriginal monuments and remains have been permanently preserved to the public. Most have been marked with descriptive metal tablets. Others are being protected. Surveys and explorations have been conducted in many sections of the state.

It is also engaged in encouraging the establishment of public museums and collections and in discouraging the manufacture and sale of fraudulent antiquities.

Regular monthly meetings of the Society are held during the months September to May, inclusive, in the Trustees Room of the Milwaukee Public Museum. Meetings are open to the public. No regular meetings are held during the months June to August, inclusive. Special field meetings are occasionally held during the vacation months.

The results of its research and other activities are made known through its regular quarterly publication, The Wisconsin Archeologist. Thirty volumes have appeared. The Society has a large membership distributed through every part of the state.

It is co-operating to the fullest extent with all of the various scientific and educational organizations and institutions of Wisconsin.

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Wisconsin Archeological Society

Milwaukee, Wisconsin

Incorporated March 23, 1903, for the purpose of advancing the study
and preservation of Wisconsin antiquities

OFFICERS

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W. C. McKern

VICE-PRESIDENTS

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W. W. Gilman
R. J. Kieckhefer

Dr. H. W. Kuhm
Rev. F. S. Dayton

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Rev. F. S. Dayton
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Dr. A. L. Kastner
R. J. Kieckhefer

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W. C. McKern
Charles G. Schoewe
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George A. West

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PUBLICITY—J. G. Gregory, A. O. Barton, E. R. McIntyre, R. K. Coe.

SPECIAL

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FRAUDULENT ARTIFACTS—Joseph Ringeisen, Jr., E. F. Richter, Geo. A. West.

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Wisconsin Ojibway Indians building birch-bark canoe.
Courtesy, Milwaukee Public Museum.

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SIEUR CHARLES DE LANGLADE

Theodore T. Brown

The annals of the French regime in Wisconsin and the Northwest bring to us many commanding and heroic personalities, and among these we find Sieur Charles de Langlade, named "Bravest of the Brave" by the Indians. To Charles de Langlade and his father, Augustin, rightfully belongs the title, "Founders of Wisconsin", as they were the first permanent white settlers in the area now comprising our state. They likewise were the first residents at LaBaye Verte, now the city of Green Bay, establishing their log dwelling place and fur-trading post there on the east bank of the Fox River in the year 1745.

By birth and early training Charles de Langlade was well fitted to carry out his distinguished career. His father, Sieur Augustin de Langlade, was a member of the French nobility, who served for some time in the French marine, then emigrated to New France, as all Canada and the immense Northwest was then called, in the year 1720. He immediately engaged in the fur-trade with the Ottawa Indians in the vicinity of Mackinac, and probably had entire control of the trade at that point, as it was customary to obtain a license from the French government of Canada for that purpose.

While at Mackinac, Augustin de Langlade married the sister of the head chief of the Ottawa, known as King Nis-souaquet, or as the French called him, La Fourche, or the Fork; and this connection undoubtedly added to his influence among that nation.

Charles de Langlade was the second of five children born of this union of French and Indian nobility. His education

was such as could be obtained from the missionaries stationed at Mackinac and as received from the teachings of his father.

An incident of his childhood which must have influenced his later life occurred while he was but ten years of age. The Ottawas at that time, about 1735, were engaged in war against an allied tribe friendly to the British. The village of this tribe was located on a prairie and protected by such defences as Indians were able to make. The Ottawa twice attacked this fortified village, and were repulsed each time. When urged by the French commandant to make a third attempt upon the enemies' stronghold, they declined; but at length King Nissowaquet and his brothers, prompted by some superstitious dream, whim or prestige, said they would try again provided they could be accompanied by their young nephew, Charles de Langlade, and would go on no other condition. The Commandant went to Sieur Augustin de Langlade and made known the requirement of the Ottawas. The father then instructed his son that he must go with his uncles, at the same time admonishing young Charles that he must show no signs of cowardice under any circumstances.

On reaching the enemies' village the Ottawas placed Charles de Langlade in the rear, in full view but out of danger of the attack, which was soon made; and, after a severe assault, the place was taken. The success of the attack was attributed by the Indians to the presence of the boy, and he was held in veneration by them from then on.

When Charles de Langlade reached the age of twenty-two, his father embarked with him from Mackinac to Green Bay, with the purpose of establishing a trading post and home among the Fox River Indians. The reception of the de Langlades by the redmen was pleasant and friendly, especially among the Menomini. However, the band of Indians under Te-pak-e-ne-nee, or the "Night Man", whose habitat was in the vicinity of the present city of Marinette, decided to come to the de Langlade post and forcibly take the trader's goods.

It is related that Charles de Langlade was alone at the trading post at the time of the hostiles' coming, and after their leader had made known the purpose of their coming,

replied very coolly but pleasantly, "Well, my friends, if you have come here to fight, we can cross to the prairie on the other side of the river and have some fun." The warriors knew too well his reputation as a soldier even from his boyhood, and declined his invitation. Thereafter the de Langlades had no further trouble with that band of Menominis.

Previous to the out-break of the French and Indian war in 1755, Charles de Langlade resided at Green Bay in the capacity of Indian agent for the French government, while his father carried on in the fur-trade. While Indian agent, Charles de Langlade enlarged his influence among the Indians of the Northwest, and together with his father assumed the leadership of the small group of white settlers at La Baye.

The first service rendered to the French government in the French and Indian War by Charles de Langlade was his work in raising the Ottawas, Chippewas, Menominis, Winnebagoes, Potawatomis, and Hurons, and repairing with them, under his leadership, to the defense of Fort Duquesne against the English, and also to carry on the war against the frontier settlements and forts of the British Colonies.

Upon the arrival of Sieur de Langlade at Fort Duquesne at the head of his command of Indians, French voyageurs and traders, spies were sent out to discover the approach of the British under General Braddock. The spies reported that Braddock was within a half day's march from the Monongahela. Accordingly, a detachment of French troops and de Langlade's command were sent out to interrupt the British advance by a surprise attack from ambush. This strategy was very successful, and especially so because Braddock failed to heed the advice of his American associate, Major George Washington, and exposed himself and his men to the protected fire of de Langlade's French and Indians. The British were defeated and forced to retreat with heavy losses, and de Langlade gained his first major military success.

Immediately after Braddock's defeat, Charles de Langlade carried on for the French in a series of battles, including attacks on British frontier forts, the capture of Fort William Henry under Montcalm, the defense of Fort Ti-

conderoga, Crown Point, Fort Niagara, and in the great battle before Quebec, on the Plains of Abraham, where his commander, Montcalm, was killed.

Some conception of the bravery of Charles de Langlade in battle is given in an account by a contemporary and fellow-soldier, De Gere, who relates that he never saw so perfectly cool and fearless a man as Charles de Langlade, who, at the defense of Fort Ticonderoga, during the height of battle, paused amid a hail of lead to calmly reach for his pipe and tobacco, strike a light and puffing contentedly, continue firing his gun at the advancing British.

In 1759 Charles de Langlade was married to Charlotte Bourassa of Montreal, and brought his bride to his home at Green Bay, where he resumed his work as Indian agent and leader of the settlement. His valuable service to the French crown was rewarded in the year 1760, when on repairing to Canada he found a commission of lieutenant in the armies of France awaiting him, bearing the signature of Louis XV. of France, and dated Feb. 1, 1760.

This commission, the oldest and one of the most valuable manuscripts relative to the French regime now extant, is today in the possession of the Neville Public Museum of Green Bay; purchased from the heirs of Judge Morgan L. Martin, Miss Sarah Greene Martin and Miss Deborah Beaumont Martin. Judge Martin was a distinguished jurist and leader in pioneer Wisconsin and Green Bay.

After the defeat of the French by the British and the passing of French dominion in 1760, Charles de Langlade was called to Mackinac, with other leaders of French settlements, to confer with Captain George Etherington, the British commandant. As a result of this conference, the French leader, De Langlade, was made Indian agent for the British at Green Bay, and permitted to retain all his lands along the Fox River.

Upon the outbreak of the Revolutionary War, Charles de Langlade was commissioned a captain in the British army, and continued his residence at Green Bay. The red officer's coat worn by him at that time is now numbered among the treasured momentos of the "Bravest of the Brave" in the possession of the Neville Public Museum.

Other valuable relics of the de Langlades' today exhibited in the Neville Public Museum include a pearl handled dagger, bearing the jeweled insignia of the "Order of the Garter", which belonged to Augustin de Langlade; an ivory handled officer's sword carried by Charles de Langlade, spectacles, a charcoal foot-warmer and a brass candlestick with Bohemian glass pendants which belonged to Madame Charles de Langlade, and a crucifix which belonged to Charles de Langlade.

Mr. Sidney-Bedore, noted sculptor and creator of the group the "Spirit of the Northwest" at Green Bay, has placed a sketch of Sieur Charles de Langlade in the Neville Public Museum de Langlade collection. The sculptor made this sketch from a description of the great warrior given by his grandson, Augustin Grignon, in which he is pictured as being of medium height, of powerful physique and military appearance.

Sieur Charles de Langlade was greatly esteemed by his contemporaries in Green Bay and Wisconsin—both among the Indians and white settlers. His integrity was proverbial, his will determined, and his bravery almost legendary. He was a dominant figure in eighteenth century Green Bay and Wisconsin. His restraining influence upon the often hostile redmen was a great aid to the progress of our settlement and civilization.

He died and was buried at Green Bay in the year 1800, and his war-like and indomitable spirit is best brought out by his dying wish that even though he had participated in ninety-nine battles he might engage in one more to make his record an even hundred.

No more picturesque personality than Sieur Charles de Langlade is to be found in Wisconsin history.

USES OF WOOD AND BARK AMONG THE WISCONSIN INDIANS

Charles G. Schoewe

Even in the so-called stone age of the American Indians, artifacts other than of stone were used. Wood and bark, for instance, were important materials that were put to many uses. We have to enter a field of investigation other than the archeological in collecting such articles. Due to their perishable nature, we find but very few in mound excavations, although wooden articles have been found, rarely, in dry cave researches. These are, of course, so limited in number that they supply but meager knowledge for the archeological student. About the only method left is that of collecting from Indians who have saved specimens handed down to them from generation to generation. This type of collecting is not an easy task since these people cherish such objects and are not disposed to part with them easily.

The Indian uses of wood and bark may be listed under the following heads:

Containers—bowls, baskets and boxes for feathers.

Implements—spoons, arrow shafts, possibly spear shafts, bows, war clubs, mortars and pestles, hoe handles, axe and adze handles and pipe stems.

Transportation equipment — cradle-boards, snowshoes, dugouts, bark canoes (frontispiece), yokes and pack saddles (historic).

Equipment for games—lacrosse sticks, game markers and snow snakes.

Ceremonial equipment—images, drums, drum sticks, rattles, flutes, whistles and mnemonics.

Shelter equipment—houses (winter and summer) and stockades.

Burial equipment—use of shelters over dead, in or above graves, and grave markers.

This classification is not to be taken as complete, for there were, possibly, many other uses for wood or bark, but it gives some idea of the uses to which these materials were put.

I have been very fortunate in making quite a large collection of old wooden articles from the Potawatomi (forest division) now located in Forest County, Wisconsin.

It is not at all an easy matter to persuade the Indians to part with their old heirlooms, as one may call them. Money will not always buy them, and if this is doubted, one has only to try it. In the first place, such articles are seldom shown to outsiders and many are kept for religious or ceremonial purposes, which makes it doubly difficult to persuade the owners to part with them. One important factor in collecting from the Indians is an intimate acquaintance with them; moreover, one should be kind and sympathetic towards them and make the usual gifts of food, clothing and money; also offerings of tobacco to their dream drum and their deities. If you have followed along these lines, you may be in position to do some real collecting.

The fact that some years back I was ceremonially adopted into the Potawatomi tribe and given an Indian name helped me considerably in my collecting, as this made me socially one of them. The name given to me was Spe-mi-ka-naw-bat, meaning, sleeper above, a name belonging to the Bald Eagle Clan. The name has reference to the eagle's habit of always sleeping above, or high up, and never low or on the ground. Hence the name, Sleeper Above.

One of my prized wooden bowls was secured in October, 1925, from a Forest Potawatomi woman by the name of Ka-ga-a-juan who lived at Planets, Forest County, near Stone Lake. She informed me that the bowl was made some 300 years ago, near where the city of Milwaukee now stands, by a woman named Kish-ish-ka. It was in turn handed down to a Potawatomi named Wab-a-ka, and then to Ka-ga-a-juan, from whom I secured it. The bowl is made from the burl of a swamp black ash tree and is perfectly round. It is $13\frac{3}{4}$ inches in diameter, 43 inches in circumference and $4\frac{3}{4}$ inches deep. The markings resemble those of bird's-eye maple. While the bowl is old it is in the best state of preservation and still retains that velvety, oily feeling. Its good condition is due to the fact that it was not used for everyday purposes but only on ceremonial occasions. Many weeks or months must have elapsed from the time it was nothing more than an ugly

burl to the time it became the beautiful finished product it now is, but 300 years ago time meant but little.

Another extremely interesting bowl, possibly more so than the one heretofore described, due to its graceful shape, was collected in December, 1931. It is made from the burl of a beach wood tree and is egg-shaped. It has a circumference of 37 inches and is $12\frac{1}{2}$ inches in diameter at its widest part and 4 inches deep. In style it resembles more a Winnebago type but, having obtained it from the Wewason family, who are Forest Potawatomi residing near Stone Lake, in Forest County, I have no reason to doubt that it is a Potawatomi bowl. In color it is one of those pleasingly deep, rich shades of brown. The rim has a sort of an offset, or flange, which comes to a raised point decorated with four notches. It is exceedingly smooth with well-rounded rim and also has that peculiar velvety feeling due, I suppose, to long usage.

Another quite rare type is illustrated by an effigy bowl resembling the lower jaw of an eagle or hawk, which it represents. It is made of curly birch, is very thin and is $3\frac{3}{4}$ inches long and $2\frac{3}{4}$ inches wide at its widest part, terminating at the other end in a turned up point representing the tip of the bill. I obtained this specimen from a Potawatomi Indian by the name of John Manis, living near Stone Lake, who informed me that it was used only in ceremonies.

Another unique bowl is oval-shaped and made of hard maple. As it is very shallow, it might be termed a saucer instead of a bowl. It is $3\frac{1}{2}$ inches wide at its widest point and $4\frac{3}{4}$ inches long. The Potawatomi from whom I secured this specimen informed me that it was used for mixing medicines. With it came a small wooden spoon incased in a buckskin holder. These also came from the large settlement of Forest Potawatomi in Forest County.

Of the smaller bowls, one made out of the burl of a cedar tree is the most interesting. It is perfectly round, 4 inches in diameter, 12 inches in circumference and $1\frac{1}{2}$ inches deep. The workmanship is perfect while the color approximates a golden brown. It is so smooth and neatly shaped that one cannot help admiring it. This I also secured from the Potawatomi in Forest County.

Another bowl, one which must have been highly valued by its owner, is made of the knot or burl of the wild cherry. Observing it to be cracked the owner thought enough of it to mend it by drilling two holes near the rim and drawing the crack together with a short wire. In shape it is an elongated oval, $19\frac{1}{4}$ inches in circumference around the rim, $5\frac{1}{8}$ inches wide at its widest part and $2\frac{1}{2}$ inches deep. A flange or offset encircles the rim. Its base is $3\frac{1}{2}$ inches wide and $4\frac{1}{2}$ inches long. From the dimensions of the rim as compared to those of its base, one can conceive the tapering of its sides. The color is a deep, rich shade of reddish brown. The workmanship is excellent and the wood worked down to an exceedingly smooth finish. I secured this bowl from a Potawatomi by the name of Be-na-shes; meaning, little bird.

Another bowl which I collected from the Potawatomi was used in playing a gambling game. It is an unpretentious-looking, shallow, oval-shaped bowl made of cottonwood. Three small strips of metal, with two nails in each strip, bind a crack which runs more than half way across the bowl. Its circumference is 35 inches, the diameter at its widest part $11\frac{1}{2}$ inches, at its narrowest part $10\frac{3}{4}$ inches, and its depth $2\frac{3}{4}$ inches.

I have collected ten specimens of old wooden spoons. The smallest of these is 4 inches long and the largest, $12\frac{1}{4}$ inches long. All have handles terminating in a hook. The object of this hook is to prevent the spoon from slipping into the bowl, hanging by means of the hook from the rim. The hooks are carved very much alike, with a little variation at their terminating points. The largest spoon, however, has an elaborately carved handle above the regular hook.

An interesting and unusual type of spoon which I collected from the Potawatomi is one with a very deep bowl, as compared to the other spoons which have rather shallow bowls. The bowl of this spoon is $1\frac{3}{4}$ inches deep while the circumference at the rim is 9 inches and the entire length of the spoon is 8 inches. It is made of black sugar maple and was used for drinking blood at certain ceremonies, or so I was told by the Indian from whom I secured it.

Some of the spoons were used for ceremonial purposes while others were used in every day life. One can still see wooden spoons in use among the Potawatomi when visiting their sugar bushes during maple sugar time.

Mr. Huron H. Smith, curator of Botany at the Milwaukee Public Museum, was kind enough to identify the wood in every specimen described herein. The different woods used in the spoons which I have collected are the following: black sugar maple, wild cherry, basswood, swamp green ash and black willow.

Many of the old Indian wooden bowls are so exquisitely executed, so rich in color and so gracefully shaped that they will not be amiss on the mantel of your fireplace as an added decoration to your room.

THE ORIGIN AND DISTRIBUTION OF COPPER ARTIFACTS

Anton Sohrweide, M. D.

The aboriginal culture in the Mississippi and Great Lakes area both in ancient and in modern times is not sharply differentiated from that of neighboring areas. It is no exaggeration to say that it is on a par with that of eastern tribes and it is only in certain respects inferior to that of the South. As elsewhere in similar periods, fishing, hunting, and seed gathering were the vocations of the Algonquian and Souan tribes whose ancestors for undetermined time possessed the soil of this rich area of rolling forest-covered hills and sparkling wild-rice-bordered lakes and rivers. Agriculture, if the garden beds of Michigan are recalled, was extensively engaged in. Mounds are abundant in this area and in Wisconsin are characterized by numerous animal forms.

The culture of this area presents among others a feature of exceptional archeological interest in the copper mines of Isle Royale in Lake Superior. This island, from whose rugged shores came most of the copper used in pre-Columbian times by tribes throughout the United States, is about 45 miles long and 9 miles wide and has a total area of 229 square miles. It is about 8 hours ride by steamer from Duluth, Minnesota, but is nearer to Port Arthur, Ontario.

The North American tribes at first used copper nuggets or small metallic masses that had been carried Southward by the glacial drift and deposited on the surface through its recession. Such nuggets, because of their comparative rarity, supplied only a small amount of metal. The knowledge of the discovery of copper, its general utility, malleability and innate beauty soon passed beyond its local confines and disrupted the unbroken reign of stone perhaps many decades before the arrival of Europeans. There is no doubt that the mines on Isle Royale had been extensively used before the coming of the whites. The extensive diggings and the thousands of boulder hammers, some of which are grooved, confirm this belief.

There is no doubt that most of the copper used by the North American tribes east of the Mississippi River came from the Great Lakes region. Copper is found only in limited quantity in Virginia, North Carolina, Tennessee, Arizona, New Mexico, and Nova Scotia; these latter sources were not used extensively and it is not certain that the natives utilized these sources to any great extent before the coming of the Europeans. Copper was much and skilfully used in Alaska before the whites came and possibly some of the copper employed by the Southern tribes had its origin in Cuba or Mexico. There is no question that Cuban or Mexican copper, if used at all, was used in limited quantity, for if it had been commonly brought from these latter places this practice would have ultimately resulted in the production of artifacts peculiarly exotic in design and method of manufacture.

That even the most intricate repousse' effects found in southern burials could have been created in their entirety by resident tribes with their own primitive means has been demonstrated conclusively by the archeologists Willoughby and Cushing in their reproductions of repousse' effects using only beach pebbles as tools. Furthermore, analysis of metals and absence of European or other exotic objects confirms the belief that the copper work of southern areas is American in origin and pre-Columbian in age.

Among the Indians of the Pacific states little copper was used; the Indians of the Northwest, however, were skillful artisans obtaining their metal from the valley of the Copper River.

In Wisconsin nearness to the ancient diggings of Isle Royale accounts for the abundance of artifacts of pre-Columbian age found on certain sites. Such native copper articles have been found in particular abundance on sites at Two Rivers, Two Creeks, on Black River sites south of Sheboygan, and on the banks of the Wolf River in Waupaca County. "A provisional description of the territory in which such artifacts have been found up to the present time may be given as extending from about the middle of Milwaukee County, northward to Door County, thence westward to the Wisconsin River or slightly beyond, thence southward along this stream to Dane County and eastward

to Milwaukee County, the starting point. Embraced within this territory are the extensive lake shore sites from which thousands of articles have already been recovered, and certain well known sites in Green Lake County and adjoining counties,⁴⁴ the Rush Lake and similarly productive regions."

A typically Wisconsin problem relative to pre-Columbian copper is the use of this metal by the Winnebago prior to their contact with white traders. The Winnebago used copper implements in abundance yet Paul Radin writes that all Indians questioned by him denied that their ancestors ever used copper before their contact with the whites (about 1632). This is a mooted question. It is generally supposed, although there is no conclusive evidence for it, that the Winnebago obtained their artifacts through intermediaries, probably the Menominee and Potawatomee.

There is every reason to believe that copper, if it was used at all by the Winnebago before the advent of white traders, was limited in use for it is never mentioned in Winnebago mythology. While it is true that mention is made of copper in the myth of The Twins, sections of this myth show marked European influence and can hardly be accepted as representative of the Winnebago culture. Again, copper is found not infrequently in burial mounds, but there is no way to determine whether these structures are post-Columbian or whether the burial occurred years after the erection of the mound.

With the coming of French and English traders into the Great Lakes region the influence of a superior culture made itself felt and foreign copper superseded the aboriginal; it is, of course difficult to draw very definite lines between native and exotic phases but there is no question about copper on aboriginal sites being aboriginal (native) metal.

The sheet copper of European origin differs from that of prehistoric copper in that it is of uniform thinness, is not pecked and on analysis has been found to contain sulphur, a peculiarity found only in European trade copper.

Within historic time the mining of native copper lessened and its manufacture into artifacts was modified by European influence. Soon it was given up in favor of the now

⁴⁴ Brown, C. E., *Wis. Archeol.*, v. 3, no. 2, p. 58.

easily obtainable and highly prized trade sheet copper called "contact material" by collectors.

The early traders carried on a lucrative traffic in this sheet copper, the origin of which is a matter of conjecture. Certain it is that colonial pots and kettles of copper furnished most of the pieces of sheet copper found on many village sites. Neil M. Judd, in a personal communication with the writer, states: "Prior to the advent of the Europeans, our American Indians hammered out of copper ore all their copper artifacts, however thin. Sheet copper was unknown to them before the whites came; then pots and kettles furnished the principal source. We do not know the origin of these colonial utensils."

WHAT A SEASON BRINGS FORTH

Geo. Overton

In early spring, when patches of snow cover the fields and the ice still covers the beaches, the urge to get out where lived the people of old, to search for relics of their culture becomes increasingly stronger as the days slowly pass. We ponder over the problems that these people worked out in their daily scheme of life. We are buoyed by the hope that the new season will bring forth something to add to our meager knowledge of their life history.

As soon as the drying mud permits and the ice melts along the inner edge of the beaches, the group is out and the game is on to see who will have the honor of finding the first Indian artifact. Our place is the west half of the N. E. 1/4 of Sec. 30, Township 19 N., Range 16 E. The southwest corner runs out into a marsh bordering the Fox River. A broad creek meanders across the approximate middle of the farm. Power dams have raised the level of our waters. This caused the marsh to spread out to the high land. An ancient beach that existed before the silting process had formed the marsh was revealed. Here we find evidence of a very old culture. We have named this the West Beach. The north bank of the creek at its mouth is the North Beach and the south bank of the creek is the South Beach. The old French Trading Post was a short distance inland from the North Beach which was the boat landing for the Post.

It is not my purpose to burden you with a catalog of our finds nor to detail our activities, but only to mention a few of the outstanding things we found during the season of 1931.

The field near the Trading Post Site produced a very unique tool of fine grained stone resembling a greenish grey slate. This artifact is $4\frac{1}{4}$ " long, $2\frac{3}{4}$ " wide and $\frac{9}{16}$ " thick. On one side is a hole $\frac{5}{16}$ " across and about the same in depth, evidently used to hold the upper end of a spindle drill shaft. The opposite side was very smoothly and evenly worn as though it had been used with sand and

water as an abrading stone. The ends were marked as if it had been used as a pecking or chipping stone, possibly on flint arrow heads. Though the Indian used many make-shifts and often made the same tool serve a multitude of purposes a combination tool such as this is very rare.

I stood on the North Beach of Overton creek where it enters the Fox River. The high water covered the beaches. I scanned the bottom as each receding wave momentarily revealed the pebble strewn shingle. I saw what appeared to be a large fragment of a "trade pipe" stem. A long stick helped me to secure it and I held in my hand a drilled plummet made of some large sea shell. This plummet is $2\frac{5}{16}$ " long, oval in cross section, and $\frac{1}{2}$ " and $\frac{3}{8}$ " in diameter. Through how many hands did this talisman or ornament pass on its long journey from the southern sea to the shores of the Grand Butte? Was it trade or conquest that brought it hither?

Jim, aged six, found a very perfect, mottled grey flint arrow point $2\frac{1}{4}$ " long and $1\frac{5}{8}$ " wide, sharply barbed. It had a very flat rounded tang. He also found a silver plated button which was $\frac{3}{4}$ " in diameter. On it was a spreading eagle with shield on breast and arrows and branch in talons. On the back was stamped "Armitage, Phila." This specimen was found on the Trading Post site.

Betty, age nine, found a hollow cone made from the tip of a prong of an elk's horn, $1\frac{9}{16}$ " long, $11/16$ " on large end and $5/16$ " on small end. The small end shows tool marks where it was whittled down. Was this a part of a pipe or was the large end filled with a tuft of hair to make a tassel? Lack of nicotine discoloration would place it in the class of ornaments. This specimen also was found on the Trading Post site.

Tom contributed a perfect rhyolite point, barbed, $1\frac{7}{8}$ " long. It possessed a small square butt $1\frac{3}{4}$ " by $\frac{5}{8}$ ", notched sides and serrated edges. A perfect blue flint drill $2\frac{3}{8}$ " long, was also found.

Mary Jane has the following to report: Cream colored flint spearhead 3" by $1\frac{7}{8}$ ", truncated barbs. Turtleback flint spud 2" by $\frac{7}{8}$ ", found on West Beach. Perfect leaf shaped arrow, black and grey flint 2" long by 1" broad, West Beach. From the Trading Post: Part of the hammer

of a Northwest gun. Rusted clasp knife, English pattern, blade $3\frac{1}{2}$ " long. Two brass ramrod loops from flintlock gun. Small brass bell. Disc bead of bone $11/16$ " diameter. Several gun and rifle flints and bullets. A number of glass and wampum beads.

I was working over the North Beach where the boat landing of the old Trading Post was located. I found a disc of limestone about four inches across and three-quarters of an inch thick. It had without question been chipped into shape. Several more lay near which I picked up and examined. All were of the same general shape and size. Being of limestone I ignorantly supposed they could not belong to any Indian culture, and tossed them back. A few days later the good wife saw them and waded out and recovered nine which varied from $3\frac{1}{2}$ to $4\frac{1}{2}$ inches in diameter and were $\frac{3}{4}$ " thick. Several more were found on the South and West beaches. I found a very perfect one on the bar at the end of the South Beach. Going over the collection I discovered we had two more, picked up at some previous time on the West Beach. We probably have fifteen that are true to type and several that are more crudely formed. The number of these discs and their similarity in size and shape indicates they must have been made to serve some purpose. What use the Indians made of them has thus far remained undetermined.

The most persistent, enthusiastic, and faithful worker in our little group is Mrs. Overton who spent more hours searching than all the rest of us together. The articles enumerated in the following paragraphs were all recovered through her untiring efforts. On the South Beach: Near the west end of the beach a bone implement $5\frac{1}{4}$ " long, $\frac{1}{2}$ " wide at one end, $\frac{3}{8}$ " at the middle and $\frac{1}{4}$ " thick, was picked up. The broad end is beveled to a blunt chisel edge. The small end tapers from near the middle to a rounded flattened point. This implement is not an awl. The rounded point and the flat broad end might suggest its use in making incised decorations on pottery. A small bone awl $2\frac{3}{4}$ " long. A red slate polishing stone, chipped to an ovoid shape, 3" long by $2\frac{1}{2}$ " wide. One prong of a bilaterally barbed iron sturgeon spear, $8\frac{1}{2}$ " long and generally $\frac{3}{8}$ " in diameter. The main spring of a gun lock. A badly rusted

fragment of scissors. The smallest hammer stone of the season 1 13/16" long, 1 1/4" wide by 9/16" thick. The edges show much use.

On the West Beach: A celt of banded green and black slate was found about half way down the west beach. This celt is 5 1/4" long, 3 1/4" broad at the cutting edge and 2 1/4" at the top end, 1 1/8" thick. One edge and the top end have not been pecked smooth but were ground over, the hammer stone chipping leaving rough depressions. It appears as though the old artisan had tried to save all he could of the rare and beautiful piece of material and yet make an artifact true to type. The rest of the celt is nicely polished.

In this same vicinity were found several points and scrapers of a beautiful yellow quartzite; triangular point 2 1/2" by 1 1/2", notched arrow 2 1/4" by 1", single-barbed fighting point 2 1/2" by 1 1/8", round end scraper 1 1/4" by 3/4", very thin flake 1 1/4" wide and notched like a fish tail, irregular flake 3" by 1 1/2" one side chipped into a crescent shaped scraper, end of a snub-nosed tanning scraper, a small point 1 1/2" by 3/4", a large flake of raw material 4" by 2" the sharp edge showing use as a knife or scraper, a very finely chipped knife 2 7/8" by 1 1/8", with a thin rounded tang. All these pieces were found within a space of two or three rods along the beach.

Farther down the beach a mottled white flint notched spear 2 3/8" by 1 5/8", tang 1 1/8" wide. Painted flint spear 3 3/8" by 1 1/8", rounded tang.

The choicest find of the season was a grey, finely grained stone plummet 2 3/8" long, 1 5/8" wide and 1 1/8" thick. It has an incised line on each side which extends entirely around the plummet on its long diameter. The convex faces meet to form a well defined angle at the edges. This type of plummet is very rare in our locality. I know of only one other, found by Geo. Freer on Lake Poygan, although there may have been others, unreported or carried off by commercial relic mongers.

I do not wish to leave the impression that we live in an archeological paradise where one may walk across a field and get a pocketfull of fine artifacts. On the contrary, persistent, intensive search is only meagerly rewarded. Some

of our fields have been cultivated more than sixty years. There are seven of us and all are "bugs" on the subject of archeology. Each of the younger members is encouraged to keep his or her finds in a little private hoard, but the whole is available for our study collection.

ARCHEOLOGICAL FINDS IN THE UINTAH BASIN IN UTAH

Albert B. Reagan

The writer's investigation in the Uintah Basin, in Utah, under a grant from the Laboratory of Anthropology at Santa Fe, shows that its main centers of ancient occupation are Nine Mile (Minnie Maud Creek) Canyon, east of Price, Hill (Creek) Canyon, forty miles south of Ouray (including some finds on Willow creek and along Green river), the Brush Creek Region (including some settlements at Greendale, or the Lewis Allen Country, forty-five miles over the mountains to the northwestward), and the Ashley-Dry Fork valleys, near Vernal. These will be mentioned more in detail later.

Judd⁴⁵ had found a definitely Puebloan culture at Willard, Beaver and Paragonah to the westward, in Utah; and Roberts⁴⁶ had classified the ruins about Willard as close approximations of the A type dwellings of the beginning stage of his Pueblo I horizon in the Piedra district in southwestern Colorado, thereby also correlating them, in part, with the writer's⁴⁷ finds in the Pine River region, a little to the northwestward in the same state. We had therefore expected to find remains of this series in the Basin which is just east of the Wasatch range of mountains from the typical Willard-Beaver culture area, and we did.

Eleven earth-lodge villages of the Willard Pueblo stage were visited. However, on the whole, the individual dwellings, which were of typical daub-and-mud (jacal) construction, seem to be more squarish to rectangular in outline than his descriptions would indicate the Willard houses to be. Some of them also exhibit a sunken floor as the Class A type of houses of Pueblo I horizon so often shown in the Piedra District. Otherwise, with their artifacts which are

⁴⁵ Judd, N. M., 1926, p. 8.

⁴⁶ Roberts, Frank H. H. Jr., 1930, p. 71.

⁴⁷ Reagan, Albert B., 1919, pp. 171-176; Roberts, Frank H. H. Jr., 1930, p. 69.

scattered about them, they are Willard type houses as described by him.⁴⁸

These houses, in turn, with the coming and going years, changed into houses with solid walls, much resembling the George-Bradshaw type of houses, also found near Beaver, Utah, by Judd,⁴⁹ which will here be considered as the Beaver Culture. A typical house of this sort is that described by the writer as abutting "Big Rock" on the west, about a mile northeast of Mrs. Daniels' place, on the bench to the right of Uintah river, above Fort Duchesne.⁵⁰ It would therefore seem that the culture here, as represented by the earth-lodges and the first series of solid-walled houses, should be termed the Willard-Beaver Culture, if we use Judd's nomenclature, as the one evidently grew out of the other.

Some of the caves also seem to have had edifices within them of a daub-and-wattlework (jacal) nature, much like those seen by the writer in the Kayenta cliff-houses in Arizona,⁵¹ except they seem to have been of a larger and of a more substantial, jacal nature. Their apparent underposition in the debris and their structure would also seem to place them as belonging to this same culture.

As the artifacts are the same or very similar, the squarish houses of the Brush Creek and Greendale regions, part of which were built of undressed river cobbles,⁵² seem also to have been made by these same people and also seem to correspond somewhat to Roberts Class C houses of the Piedra district above.⁵³ The small, circular structures and stone-edged circles, squares, and rectangles and rock-pile mounds about them also appear to correspond to the shrines of the Small House People of northern New Mexico, as described by Dr. Douglas.⁵⁴ The houses here, which are not in groups, seem to have been inhabited in about the beginning of Pueblo II horizon.

⁴⁸ Judd, N. M., 1926, above. See Roberts, Frank H. H., Jr., 1930, pp. 69-71; and Reagan, Albert B., 1931 a, and 1931c, p. 126.

⁴⁹ Judd, N. M., 1926, pp. 21-35.

⁵⁰ Reagan, Albert B., 1931c, pp. 128-131.

⁵¹ Reagan, Albert B., 1922, pp. 279-284.

⁵² See Reagan, Albert B., 1931f, pp. 132-138.

⁵³ Roberts, Frank H. H., Jr., 1930, pp. 50-59.

⁵⁴ Douglas, William Boone, 1917, pp. 19-29.

The ruins in Hill Canyon and the older ruins in Nine Mile Canyon seem to have been made by the same people but at a later period. Most of the artifacts, including the greater part of the potsherds, are identical with those found about the jackal earth-lodges above. In addition to these, a few pieces of black-on-white potsherds and an occasional corrugated piece were found in each area. A sherd of the proto-Kayenta (Tusayan) polychrome ware was also seen at the Nutter ranch in Nine Mile Canyon, Miss Catherine Nutter stating that she found it locally along with some sherds that were painted in black-and-white bars on the inside, which she also kindly showed us. The ruins of these two canyons, and especially those of Hill Canyon, all of which are of Pueblo II age, are, for the most part, circular rooms or towers, forts, and lookouts, and seem to have their counterpart in the aboriginal towers and forts in the valley of the San Juan and its tributaries, especially the Yellow Jacket Canyon and those canyons entering it from the north side.⁵⁵ However, the masonry of the buildings here is much inferior to that of the Yellow Jacket-McElmo ruins. Furthermore, the pottery here is both scanty and very crude and is usually a plain gray to dark ware without decoration; while that of the ruins of the more southern clime is much advanced both in make and in decoration. Nevertheless, the writer is of the opinion that the same people erected both sets of buildings, the towers, lookouts, cliff-houses, and forts of Hill and Nine Mile canyons antedating those to the southward by a lapse of time sufficient for them, in their southern trek, to perfect the masonry art and to develop the better grade of pottery with its elaborate decoration. The ruins left in the two regions certainly have a great likeness. The buildings also seem to have had a like religious significance as well as their other uses. They were undoubtedly used in defense against a common enemy, which, for lack of a better name, the writer has termed "Head Hunters," as will be mentioned later. It would appear that they made a stand in the Hill Canyon-Nine Mile Canyon region. Then, being driven out, their towers and forts in the southward show where they made other stands against this same people in their southern migration.

⁵⁵ Consult Fewkes, 1917, and 1919.

The writer wishes to add that, due to the artifacts being so similar on the whole, he considers that the earth-lodge (jacal house) people of the Uintah Basin, in general, including the solid-wall-house folk of the Uintah-River dwellings of the Willard-Beaver culture, with modifications, the house people of the Greendale and Brush Creek area, and the Fort-Tower people of Nine Mile and Hill canyons (what might be termed the Canyon Culture) are one and the same people, only that the Brush Creek and Nine Mile-Hill Canyon folk represent a later and more advanced stage of that culture. As there are considerable variations from the cultures found by Judd to the westward, the writer feels that this whole culture series should be termed the Uintah Culture. Furthermore, according to Roberts' classification of the earth-lodge peoples of the Willard stage, as we have seen, this series extends in the Pueblo culture scale approximately from the Class A type of dwelling of the dawning period of Pueblo I culture probably far into the Pueblo II culture period.

While the people of the Willard-Beaver-and-Canyon (here collectively termed the Uintah) culture period were building up their civilization in the Basin another and quite different peripheral people occupied the caves of the region, apparently bordering the Uintah culture and Judd's Willard-Beaver culture lands on the east. These people had unpainted, black or gray pottery, very similar to that of the earth-lodge people. Whether they borrowed the art from the Pueblos of the Uintah and Judd's Willard-Beaver cultures, or the others borrowed it from them, of course, can only be conjectured at this date. Be that as it may, the pottery left by either peoples is scanty and quite crude in make. Besides the pottery, they possessed a unique type of moccasin—the dew-claws of the deer were left on the skin of which the moccasin was made, or were sewed on it as a decoration, the dew-claws often projecting from the sole so as to serve as hobnails. They also had figurines in the Uintah Basin area, as well as in the Fremont region to the southward. Mr. Leo C. Thorne, of Vernal, has a fragment of the terminus of a clay figurine in his collection at his studio, much like Morss's figurine d of Plate 28,⁵⁶

⁵⁶ Morss, Noel, 1931, "Green River Trip," three images, p. 46, a terminus, p. 50.

and several figurines have been secured from Nine Mile Canyon, both by Noe and his companions and by Morss, both obtaining them from caves on the Rasmussen property there. The writer would add that while his party found no "skirt" terminus of a figurine, representing the cord skirt worn by the real people, the front (apron) part of a cedar-bark cord skirt was found by it in Cave 26, northwest of Vernal. These people, too, left abundant rock writings of characteristic types, as will be mentioned later, and had cave cists, both excavated in the hardpan floors, often in jug-shape, and slab-bordered cists, similar to those of Pueblo I and the Basket Maker periods. These and the other artifacts they left would tend to identify them as belonging to a culture about on a Basket Maker III level. In fact, in their culture, they consistently show a divergence in almost every way from the cultures, in general, throughout the Southwest. More will be said about this people later.

The pictographs and petroglyphs of the region show four distinct types of culture: Basket Maker, Pueblo, a people who made circular-bodied drawings of humans, probably patterning their drawings after the shape of their woven water jars and after the round faces of the sun and moon, and a "head hunting" people, who depict themselves time upon time as returning from battle with captive women and children and the heads of the braves who dared defend their homes.

We would naturally presume that the characteristic Pueblo drawings in the Ashley-Dry Fork valleys and in Nine Mile and Hill canyons were made by the peoples of the Willard-Beaver and Canyon Pueblo cultures (all three here collectively termed the Uintah culture, as above), the more advanced drawings of that culture age apparently being in Nine Mile Canyon where even typical Southwestern horned or plumed snakes are depicted. A scene in Ashley valley also shows two men carrying an image of that snake in true Hopi-Pueblo style. In a few cases undoubted Pueblo scenes, even depicting women with whorled, pumpkin-blossom-attired hair, are shown, superimposed over Basket Maker scenes which depict people in square-shouldered drawings and as wearing side-bobbed or side-locked hair.

The latter scenes, however, depict men as using bows and arrows, although the Donald Scott party from the Peabody Museum is reported to have found an atlatl (a typical Basket Maker spear-throwing device) in one of the Nine Mile caves on the Rasmussen property this last summer—the farthest north an atlatl has so far been found. Furthermore, the use of bows and arrows by these people would seem to place them in the Basket Maker III culture age, somewhere near its close.

Both the round-bodied drawings of humans and the pictographs that were made by the Head Hunters are superimposed over the Pueblo petroglyphs in many places, the latter also being superimposed over the former in some places, clearly showing the succession.⁵⁷ To what group the people of the round-bodied drawing era belonged is only conjectural. Sure it is that they had some customs that seem to ally them to the ancestors of the present Ute-Chemehuevi and certain other Shoshonean peoples. One of these was their belief in the bear. Another was their having the bear dance much as it is now had by the Utes of the Uintah Basin, as is depicted in petroglyphic group P8 which we photographed. No strife between these people and the Pueblos is depicted in the rock drawings so far as seen, and one would be led to believe that they occupied a part of the region at a time when the Pueblos were on the decline and consequently were not strong enough to drive them out.

Besides the pictures made by the head-hunting group in Ashley and Dry Fork valleys, Morss found their rock writ-

⁵⁷ The superposition of these pictures is very distinct. It is shown both by the older glyphs being much more worn than the later ones and by their being made by different methods. Some are pecked; some, rubbed; and some, made by being outlined and covered over with small drill-holes, and some are painted over the drawings of the former periods. The later drawings, too, are often placed slantwise over the earlier ones. This superposition was noticed in Nine Mile Canyon by Mr. Frank Bechwith (1931, pp. 216-222) as well as by us, he stating with reference to one such superposition, among several: "The most perfect executed buffalo (among eight) which our party saw in Nine Mile Canyon is drawn over older . . . and nearly effaced designs." Morss (1931, p. 39) also noted a similar superposition of rock writings near Thompson, just south of our area, in Utah, the writings of the same or of a similar people evidently being involved, he stating in comment on same: "It is believed that we have here stratigraphic evidence of the development of Fremont art from Basket Maker or quasi Basket Maker prototypes."

ings, mostly painted pictures, in lower Nine Mile Canyon and in the Fremont area in connection with his cave finds, as we did with the cave finds here. The only painted pictures we saw in Nine Mile Canyon (NP18 B and NP24) were undoubtedly made by this same people, as was the unpainted group NP7, which exhibits a cornute individual like the one from Site 31, near the cave on the Rasmussen property, figured by Morss as figure b, on Plate 13.⁵⁸ It would also seem that all the painted drawings in Hill Canyon (Rock Writings 2A-B to 3a-f and 7) were made by this same group of people.⁵⁹ However, it appears that the head-hunting scenes are portrayed only in the Ashley-Dry Fork regions.

As we have seen, the Head Hunters were a peripheral people who utilized the caves of the region. They pictured themselves as returning from raids with captives and with the heads of the vanquished braves, some of the glyphs picturing the captured women as wearing whorled hair as Hopi virgins now wear theirs. It should be added that the heads they are represented as carrying were probably only trophies of war as were scalps among many other American tribes. Besides having many customs and artifacts that apparently pertain to the Basket Maker culture, their glyphs also show that they had many customs of the Ute-Chemehuevi and other Shoshonean peoples, as had the people of the round-bodied drawing era, even depicting bear dance scenes as they are now carried out by the present Ute Indians and as are now pictured on the bear dance flag that is hoisted over the musicians at every bear dance in the Uintah Basin lands. However, in time they took on a quasi-Pueblo culture and became the Pueblo No. II people of the Fremont stage of that culture age, as given by Morss for one of their divisions south of our area;⁶⁰ and for a considerable time, their possessions extended, at least in part, probably from far into Wyoming southward along Green river and its tributaries to the Fremont (Dirty Devil) river in southern Utah. They, however, were out of the main stream of Southwestern Pueblo Culture and prob-

⁵⁸ Morss, Noel, 1931.

⁵⁹ See Reagan, Albert B., 1931d, pp. 236-241.

⁶⁰ Morss, Noel, 1931, above.

ably their culture did not stand closer to that culture, in the main, than the Navajo Culture of our day is to the present Hopi-Pueblo culture. It would also seem that, besides first absorbing the Basket Makers of the region, they, in time, passed from the "savage" stage directly into No. II Pueblo without passing through the No. I culture stage, due, probably to their intermarriage (or their absorbing) the Uintah (and Judd's Willard-Beaver) Pueblos who had then passed over the threshold into the No. II stage of Pueblo culture.

In further summary, it would seem that the Pueblo people of the Willard-Beaver culture to the west and southwest of the Wahsatch Mountains gradually pushed eastward into the Uinta Basin and here developed the culture which the writer has termed the Uintah Culture. This reached its culmination in the erecting of the Nine Mile Canyon and Hill Canyon forts, lookouts, and towers.

On entering the basin they drove the Basket Makers back into the mountains and for a time they seem to have had practically full sway. (They surely felt secure from enemy attacks when they dwelt in their earth-lodge huts, one would be led to believe.) A new people then entered the region who made round-bodied drawings of human beings. These seem to have had some affiliation with the then Shoshonean peoples, if they were not of the Shoshonean family themselves. They and the Uintah Pueblos seem to have lived on amiable terms, one would judge from the glyphs; but soon there was to be no peace in the basin, for a rising peripheral people to the eastward were to contest with them for the supremacy. The clash between these people and the Uintah Pueblos came, as would be expected, and to defend themselves the Pueblos, in turn, removed to the canyons where they built forts, lookouts, and towers for defense, as in Nine Mile and Hill canyons. The contest must have been long, for before its close the Head Hunters had become quasi-Puebloized, likely through their intermarriage with the captured Pueblo women that they themselves so often depict as taken captive. The final result was their inevitably wholly dispossessing the Uintah Pueblos, as their rock writings depict. And they themselves finally became Morss's Pueblo No. II peoples of the Fremont (Dirty Devil) River area, in southern Utah, as

has been previously noted. The writer's investigations also show that they extended their territory along Green river and its tributaries northward from there probably far into Wyoming. So far as known at present their complex never wholly took on the orthodox Pueblo cultures, as we know them in the Southwest. Furthermore, what ultimately became of them is yet a matter of conjecture.

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A VISIT TO THE INDIAN SUGAR-BUSH CEREMONIALS

J. F. Wojta⁶¹

Ceremonials

In early April, when the sky is clear and the sun shines brightly during the day, and when the nights grow cool, the Indian instinctively harkens to the call of nature. Some ambitious Indian starts beating the medicine drum, whose deep hollow resounding tones permeate the calm night air, thus challenging the tribe to attend the ceremonial dance, and the feast following—all of which is preparatory to the families moving to the sugar bush, where maple trees grow and where the Indians will be making maple sugar and syrup for the next three or four weeks.

A messenger is sent with a sacred bag of tobacco to visit the Indians on reservations a few days before the ceremony is to take place. When the bag is not in use, it lies on or near the sacred drum. When the messenger arrives at the home of the one with whom he desires to participate in the event, he takes from the sacred bag enough tobacco to fill a pipe and hands it to the Indian so chosen, and informs him as to the place and time for holding the sugar bush ceremonial. The fortunate Indian then puts the tobacco into his own buckskin pouch and keeps it there until the day of the feast. The recipient of this token is then bound to attend the feast and the dance. On entering the ceremonial circle he presents his portion of tobacco to the party in charge of the affair. This formality is equivalent to presenting calling cards when calling on friends in our present day social custom.

The Appointed Day

On the appointed day, every one who was presented with a pipe full of tobacco previously, ties it into a small bundle and fastens it to his arm. He then enters the ceremonial circle. The Dream drums are then sounded by their individual owners who also chant a peculiar weird melody. After

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the chant is ended, the medicine man who is the spiritual leader of the tribe, steps into the center of the circle and goes through the rituals of the feast.

The Feast

The feast proper is now begun. The food, which was prepared for the table during the progress of the ceremony, is now served by the women, and is ready to be consumed. At the table, the medicine man again goes through a prescribed ritual before partaking of the food especially prepared for this occasion.

The feast is a thanksgiving to the Great Spirit offered by the Indians for their survival of the long, cruel, and cold winter, which has just passed. The season is now being ushered in, as the *Maple-sugar-making-time*. It is during this season that the sap in the trees begins to flow, when nature is quickened to life, and which, to the average Indian, is a sign full of hope and happiness.

Change of Drums

Immediately following the feast the Midi drum is used instead of the Dream drum. The Midi drum is larger and of deeper tone, occupying the center of the ceremonial circle. The duty of the keeper of the drum is to keep it tuned up and to keep it from ever touching the ground. This drum is mounted on four staffs or supports, arranged to the points of the compass in upright position. These supports are beautifully trimmed with feathers, furs, and beads in a symbolic design. Each support has a ceremonial significance.

The first beat on the drum by its keeper indicates that ceremonies have now begun. The singers and keepers of the drum take their places in a circle around the drum. The other members take their places in the outer circle. The beating of the drum is accompanied by a weird chant, and at that time the members of the outer circle start the slow solemn procession around the drum. It is highly desirable that the participants keep in step with the rhythm of the chant, in the procession.

Dancing

The dancing now begins. The beating of the drum is faster and singing is more spirited. After the dancing has been going on for some time, one of the dancers is seen untying the bundle with which he entered the ceremonial circle. He then carefully examines its contents and picks up an article from it, hands it to his fellow member who immediately arises and joins the others in a dance around the circle to the tune of the drum. This is called the *Give-away-dance*. In this dance, a portion of the member's worldly goods are given away as an offering to the great spirit for his wonderful kindness and mercy to his children. Only a certain portion of their food is given away. This custom among the Indians is somewhat similar to the Christian belief and practice of giving a tenth of our goods to God, which we call tithing. This ends the ceremonies in brief and the Indians now take off to their various trails which lead to sugar bush and to their sugar camps.

Sugaring

The first thing the Indians do when sugaring is to distribute their home-made birch-bark containers. The containers hold from a gallon to two gallons of sap each. The maple trees in the bush are next tapped. Some trees have one, others two, and still others have three or more spouts conducting the sap to the containers.

The Indians collect the sap regularly, which is not an easy job, and convey it to large cast-iron kettles where it is evaporated to a consistency at which sugar granules begin to appear. From this substance sugar and maple syrup is made. An Indian during one season will make from 200 to 300 pounds of sugar and from 50 to 75 gallons of maple syrup. This is a home product and is almost entirely used for home consumption.

After the sap stops flowing and as the buds begin to leaf, the Indians will trek back again to their homes and prepare for the solemn ceremonies of initiation into the Midi Lodge.

Customs of Indian Tribes

There are many versions about Indians, as to their origin, their customs, and their mode of life in general. The question is often asked, "How did the Indians come to have so

many chiefs?" There was a time when the Indians lived as one large family, and were more friendly with one another. There was only one chief to a tribe. For instance, the Lake Superior Chippewas had only one chief. His name was Gitchi-bi-shi-ki. It was during the reign of this chief in the early days, that the British came in contact with the Indians and when treaties were negotiated between whites and Indians.

It was rather difficult to negotiate treaties with only one chieftain; therefore every clan of the tribe was given the right to choose one representative who was the spokesman for his particular clan at every tribal meeting of any importance. This tribal system was in vogue among the pagan Indians for untold ages.

Every tribe of Indians was divided into separate groups and each group had a totem or a group symbol. For instance, one would belong to a fish clan, and he was governed by the iron-clad rules of his particular clan. By moving to another section of the county, he would inquire about the fish clan, and finding it he would be received as a brother, if a man—or a sister, if a woman, as the case may have been. One of the iron-clad rules was that members of the same clan could not marry out of the clan. It was sort of a fraternal brotherhood. For example, if one member of the clan was injured by a member of another clan, all would feel injured and seek revenge.

A member of the bear clan could not represent the members of the fish clan; so when the different governments began to deal with the Indians, it became necessary for a representative of each clan to be selected as a spokesman for his particular group. These, in time, came to be recognized as chiefs since each was recognized as a leader by his group. To-day Wisconsin Indians no longer practice their former tribal customs. They are now under federal jurisdiction and the federal government no longer officially recognizes chiefs, as such, among Indian tribes. They are treated as citizens.

ARCHEOLOGICAL NOTES

Meetings

April 21, 1932. President W. C. McKern presiding. There were 38 members and visitors present. Mr. McKern expressed his appreciation of the honor conferred upon him by his election and asked the active cooperation of all members.

Secretary Brown read the list of regular and special committees appointed at the Executive Board meeting by the president. These had been approved by the five directors present. Only three members of the Advisory Committee elected at the Annual Meeting were present. It was requested that members of this Committee attend all meetings of the Board. Treasurer Thorne had reported twenty-two members as being delinquent in their dues payments. The death of Mrs. Babina M. Dengel, a life member, was announced.

Dr. Ralph Linton of the University of Wisconsin, Madison, gave a very interesting lecture on "The Evidence of Early Man in America" in which this engrossing subject was fully considered and all of the recent evidence presented. Various members participated in the discussion which followed. The president thanked the speaker for his offering.

At the close of the meeting Dr. L. S. Buttles exhibited a series of flint and copper implements, and Mr. C. G. Schoewe, some Potawatomi woven bags, a bone netting needle, a fragmentary shell gorget, a stone celt and a hammer stone. The meeting then adjourned.

The committees appointed to serve for the year 1932-33 appear on one of the front pages of this issue of *The Wisconsin Archeologist*.

May 16, 1932. President McKern presiding. Dr. H. W. Kuhm acting as secretary. There were 30 members present. Dr. S. A. Barrett presented the following amendment to the Articles of Incorporation of the Society:

"WHEREAS, It is thought best to increase the members of the Board of Directors of The Wisconsin Archeological Society to thirty instead of ten,

NOW THEREFORE, be it Resolved that, the Fourth Article of the Articles of Incorporation of the Wisconsin Archeological Society be and the same is hereby amended, changing the number of Directors from ten to thirty, making it necessary to choose the officers of this Association from among their number, so that said Article, when amended shall read:—

FOURTH: The general officers of the said corporation shall be a President, five Vice Presidents, a Secretary and a Treasurer, and a Board of Thirty Directors, from among which number of Directors shall be elected the foregoing named officers and which Board of Directors shall constitute the Executive Board. These officers and directors shall be elected by ballot at each regular annual meeting of the Society, each of which shall hold his office for one year and until his successor be elected and qualified."

Mr. West moved, seconded by Mr. Ringeisen, that these articles be executed and filed. The amendment was adopted by the unanimous vote of those present.

Dr. H. A. Anderson, Whitehall, spoke on "Two Pioneer Visions", in which he related the experiences of two early settlers of Whitehall. He also spoke of his work for the "House of Memories", a museum to which he had devoted forty years of his life. Last year he pre-

sented a building containing the results of his four decades of collecting in the Trempealeau and La Crosse region.

Mr. C. G. Schoewe exhibited and demonstrated the use of a firesteel presented to him by an Indian.

The newly organized Division of Anthropology of the Illinois Academy of Science held its first annual meeting at the University of Chicago, May 6-7. Professional and amateur students from all parts of the state were present to participate in an enthusiastic and profitable conference. W. C. McKern addressed the meeting on the subject: Local Chronology and the Regional Distribution of Pottery-bearing Cultures. A. R. Kelly of the University of Illinois was re-elected president of the Division.

Wisconsin Field Work

Mound investigations at a number of sites in northeastern Wisconsin, under the direction of Theodore T. Brown of the Neville Public Museum, Green Bay, are reported to be under way.

Mr. M. F. Hulburt, of the State Survey Committee, has discovered an interesting ancient Indian camp site a few miles north of Merrimack, Sauk County, on the west bank of the Wisconsin River near the confluence of Printice Creek and Lake Wisconsin. The building of the Prairie du Sac dam had resulted in the complete submergence of this site at average lake levels, but prevailingly low water levels have permitted its examination. Secretary Charles E. Brown and Messrs. Theodore Brown and J. J. Knudsen accompanied Mr. Hulburt to the site and assisted in its examination. Camp site detritus was found extending several hundred yards along the shore, including hearth stones, hammerstones, flint chips, potsherds representing a Lake Michigan type of pottery, and a worked quartz ball about the size of a baseball. Mr. Hulburt will continue to keep the site under observation.

Reports From Neighboring Fields

The Department of Anthropology, University of Chicago, has an archeological expedition at work in the Illinois field, under the direction of Fay-Cooper Cole. Several mounds and village sites in Fulton County are in course of excavation. In addition, the surface survey of the state is being continued. We are in receipt of a late report of this work to the effect that one survey party has just discovered a camp site in Jo Daviess County that produces the types of pottery and arrowheads characteristic for our own Aztalan site. This is the first report of the occurrence of this culture between the Cahokia site, near East St. Louis, and Jefferson County, Wisconsin.

Earl H. Bell, formerly of the University of Wisconsin, now teaching anthropology at the University of Nebraska, has just completed a successful season of archeological investigations in Morrill County, Nebraska. He reports the discovery of data indicating the presence of ancient cave-dwellers in Nebraska. These early inhabitants made a simple, distinctly recognizable type of pottery and arrowheads different from those known for other classified cultures of that region.

Dr. Bell also informs us that a new discovery of a chipped-stone projectile point associated with the remains of pleistocene bison has just been reported by C. B. Schultz, geologist of the University of Nebraska. This is the third discovery of similar data in Nebraska to support the accumulating evidence of ice-age man in America.

We hear that W. D. Strong of the Bureau of American Ethnology, Washington, excavated a stratified camp site near Signal Butte, Nebraska, and that his party is now engaged in investigating Arikara and other old camp sites along the Missouri River.

A final report has not as yet been received on mound investigations near Faulkton, Faulk County, South Dakota. This work is being conducted under the direction of the South Dakota University Museum. It is understood that a number of old Arikara village sites were also examined.

That Old Man Depression has not entirely succeeded in thwarting the progress of archeological field work in the United States area is indicated by the fact that field investigations, other than those cited above, are under way in Maine, Massachusetts, Connecticut, New York, Pennsylvania, Indiana, Florida, Alabama, Louisiana, Arkansas, Kentucky, Oklahoma, Texas, North Dakota, Arizona, New Mexico, Utah, Colorado and California.

Miscellaneous

T. M. N. Lewis of Watertown recently delivered an address before the Watertown branch of the American Association of University Women. His subject was: Indian Burial Treasures. The talk was illustrated with specimens from the speaker's extensive archeological collections, including materials from Florida, Alabama, Louisiana, Illinois, Ohio, Kentucky, Virginia and Wisconsin. Mr. Lewis discussed the origin of the American Indians, their routes in peopling the continent, and discussed the purposes and methods of the field student of American archeology.

President W. C. McKern and former president Charles G. Schoewe were elected to honorary membership in the Winnebago County Archeological and Historical Society at the last directors' meeting of that organization.

Publications

A thorough discussion and trial of the statistical method for determining culture similarities in ethnology is contained in a recent bulletin by H. E. Driver and A. L. Kroeber; University of California Publications in American Archaeology and Ethnology, Vol. 31, No. 4, 1932. Univ. of Cal. Press, Berkeley, Cal. Price 25c.

A preliminary report on Frank Setzler's archeological investigations in a cave in Texas is given in his recent paper, A Prehistoric Cave in Texas; Smithsonian Institution Publications, Washington, 1932.

A detailed description of the excavation of an old Algonkin village site in New York is supplied by William A. Ritchie in his bulletin, The Lamoka Lake Site; Researches and Transactions of the New York State Archaeological Association, Rochester, 1932. Price 75c.

An initial attempt to classify basketry from archeological sites in the Southwest is made by Gene Weltfish in his paper, Preliminary Classification of Prehistoric Southwestern Basketry; Smithsonian Miscellaneous Collections, Vol. 87, No. 7, Washington, 1932.

The American Anthropologist for July-September, 1932 (address Dr. Robt. H. Lowie, National Research Council, 2101 Constitution Ave., Washington, D. C.), contains the following articles: Some Problems of Far Eastern Archaeology, by S. Yung Liang; The Kinship Nomenclature of the Pueblo Indians, by Elsie Clews Parsons; Navaho Dreams, by William Morgan; The Algonkin Sequence in New York, by William A. Ritchie; A Maya Calendar from the Alta Vera Paz, Guatemala, by J. Eric Thompson; The Problem of the Culture from the Arvilla Gravel Pit, by Albert E. Jenks; Miscellaneous articles by Francis Densmore, Emil W. Haury, Helen H. Roberts, H. Ian Hogbin and Ralph L. Beals.

How America Was First Peopled, an interesting article by Marius Barbeau of the National Museum of Canada, features the August number of the Scientific American.

The April-June issue of the American Journal of Archaeology, Vol. 36, No. 2, 1932, contains a number of interesting articles on archeological aspects of the ancient history of Europe.

The July number of *Man*, the monthly record of anthropological science issued by the Royal Anthropological Institute (Messrs. G. E. Stechert & Co., New York City), contains, among others, articles on inscribed tablets from Easter Island, Magic and charms in southern Nigeria, a composite bow from Hunza, archeological excavations in southern Rhodesia and ceremonial presentation of fire in north Queensland.

Articles on the education, languages, social organization, customs and folklore of the "Dark Continent" are contained in, *Africa*, Vol. 5, No. 2, April, 1932 (a monthly publication), Oxford University Press, London.

J. P. Harrington is the author of, *Karuk Indian Myths*, a short contribution to the mythology and language of this tribe of California Indians; Bureau of American Ethnology, Bulletin 107, Washington, 1932. Price 5c.

An account of an interesting Indian ceremony, rendered in text with translations, is given by Truman Michelson in his, *Notes on the Fox Wapanowiweni*; Bureau of American Ethnology, Bulletin 105, Washington, 1932. Price 35c.

The Wisconsin Archeologist

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October 1932
NEW SERIES

No. 1



PUBLISHED QUARTERLY BY THE
WISCONSIN ARCHEOLOGICAL SOCIETY
MILWAUKEE

WISCONSIN ARCHEOLOGICAL SOCIETY

The Society is a state department, receiving a part of its support from the state. Its funds are under state control. Its work is well and widely known. It has received the approval of leading American archeologists, who agree that it deserves the full support of all Wisconsin citizens interested in the state's archeological history.

The Society's activities comprise the location, recording, investigating and preservation of Wisconsin Indian remains, folklore and history, all of which are rapidly disappearing and must be recorded and saved immediately if ever.

Through its efforts many fine groups of Indian earthworks and other aboriginal monuments and remains have been permanently preserved to the public. Most have been marked with descriptive metal tablets. Others are being protected. Surveys and explorations have been conducted in many sections of the state.

It is also engaged in encouraging the establishment of public museums and collections and in discouraging the manufacture and sale of fraudulent antiquities.

Regular monthly meetings of the Society are held during the months September to May, inclusive, in the Trustees Room of the Milwaukee Public Museum. Meetings are open to the public. No regular meetings are held during the months June to August, inclusive. Special field meetings are occasionally held during the vacation months.

The results of its research and other activities are made known through its regular quarterly publication, The Wisconsin Archeologist. Thirty volumes have appeared. The Society has a large membership distributed through every part of the state.

It is co-operating to the fullest extent with all of the various scientific and educational organizations and institutions of Wisconsin.

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Wisconsin Archeological Society

Milwaukee, Wisconsin

Incorporated March 23, 1903, for the purpose of advancing the study
and preservation of Wisconsin antiquities

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The Wisconsin Archeologist

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VOL. 12

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No. 1

New Series

ARCHEOLOGICAL RESEARCH IN WISCONSIN

Earl H. Bell

Wisconsin, while not an archeologist's paradise to the worker from Mexico, Central America, or the Southwest, is an important field from the scientific point of view. The specimens found, although not spectacular, nor even plentiful, carry with them facts which scientists hope to fit together and so eventually to reconstruct the pre-white history of Wisconsin. This will be an important chapter in the book which will record the history of pre-Columbian America.

Sources of Archeological Material

The sources from which information may be gained are camp sites, trails, caves (rock shelters), mounds, and burial grounds.

The camp sites are places upon which prehistoric man has camped for a considerable length of time. Here one may find any variety of artifacts; broken pottery discarded by the owner remains as evidence of the ceramic techniques of the ancient villagers; fire-stained earth remains as evidence of a camp fire; burned hearth stones, charred bones or perhaps even charred corn are evidence of prehistoric culinary efforts and from the bones we can often tell whether an Indian enjoyed venison, fowl, or fish for dinner.

It is at the camp site that the artisan chipped his arrows and knives; one may often find piles of flint chips and occasionally a discarded flaker, indicating that here was the workshop of a village craftsman some time before the white man reached Wisconsin. In working through such a pile of chips one frequently finds broken points which probably fractured in the process of manufacture, and the archeologist who has experimented in chipping and flaking can

easily supply the rather forceful sentiment which undoubtedly accompanies such specimens. Throughout the site one may find broken or complete arrows, potsherds, copper material, stone axes, bone awls or fish hooks, beads, et cetera.¹

In the bluffs of the Mississippi and Wisconsin rivers are a number of caves, or more correctly speaking, rock shelters. Various of these have either been inhabited or used by hunting parties for shelter during storms or at night. The floor of these caves is often rich in refuse resembling that from camp sites. The walls may be blackened by prehistoric fires, and more interesting still, on the walls of these caves may be found petroglyphs, that is, incised drawings² made by prehistoric man.

The subject of Indian trails is indeed a specialized one upon which many Wisconsin students might profitably spend their time. There is, indeed, a crying need for students of this subject as much of the information is being lost with the death of old settlers. There is a very interesting bulletin on this subject published by the Wisconsin Historical Society. Mr. Charles E. Brown has indicated that an abundance of material is on file in the State Historical Museum at Madison which will be put at the disposal of any one wishing to pursue that line of research.

The material evidence of Indian trails is fast disappearing with the clearing, cultivation, and erosion of the land, but there remain some traces of them in southern Wisconsin and one would surmise that there are many more in the northerly portions of the state which have as yet escaped the ravages of erosional agencies incident to cultivation.

Indian mounds are probably the most prominent archeological evidences in the state. Because of this they have probably received more than their share of attention. The writer does not intend to discredit their importance but rather to suggest that the other sources of information mentioned above are just as interesting and certainly as im-

¹ For a complete list of artifacts found to date on Wisconsin camp sites see "Check List of Wisconsin Indian Implements," *Wisconsin Archeologist*, vol. 8, no. 3, April, 1929.

² For a more detailed account of these see, "Indian Caves in Wisconsin," Brown, Charles E., *Wisconsin Archeologist*, vol. V, no. 1, pp. 7-29.

portant. Considering the labor involved, other lines of archeological investigation are much more productive. The careful layman and amateur can find and contribute more to the reconstruction of the prehistory of Wisconsin by confining himself to these other sources of information. He can accomplish this with less labor, less expense and less danger of destroying information which a specially trained archeologist with a rather costly equipment would preserve.

Indian mounds are very plentiful in Wisconsin. It has been estimated that there are fifteen thousand within the limits of the state. To date twelve thousand have been actually located. They range in size from ten feet in diameter and one and one-half feet or less in height to ninety-five feet in diameter and eleven feet in height. The largest mound reported is the Nichols Mound, located on "The Lone Mound Farm" owned by Mr. Nichols just outside the limits of Trempealeau and is a part of the Schwertz group. It was ten and nine-tenths feet in central height, ninety-three feet in maximum length and eighty-six feet in width. Culturally it is a variant of the "Hopewell Complex."³

The earthworks in Wisconsin can be roughly divided into three general types, namely burial mounds, house platforms, and enclosures.

The burial mounds on the basis of outward appearance may also be divided into three main types, the conical, the linear, and the effigy. The simple conical mound is self descriptive. The linear mound is a long mound of fairly regular width. For some time the linears were believed to be fortifications, but subsequent investigations have shown that many of them contain burials which are undoubtedly inclusive.

Intermediate between these in shape are the oval mounds which resemble the simple conicals except that they are somewhat elongated. Another variant of the oval and linear mounds is the club-shaped mound sometimes called "polywog" mounds. These appear to have been started as a conical and then tapered out on one side.

The effigy mounds are those for which Wisconsin is most noted. Their distribution is limited to the state and the

³ McKern, W. C., "A Wisconsin Variant of the Hopewell Culture," *Bull., Public Museum, Milwaukee*, vol. 10, no. 2, pp. 243 ff.

borders of the bounding states. Some of these mounds appear to represent animals such as the fox, panther, bear, deer, turtle, et cetera, while others resemble the eagle, goose, and other birds.

The effigy mounds are found associated in groups with both conicals and linears. Research has revealed that the people who built effigies also built the other types. However, those people represented by other mound cultures did not build effigies. The effigy mound culture is distinct from other mound cultures. Various theories have been advanced which attempt to explain the symbolism of the effigy mounds. The most probable explanation is that they are of totemic importance but the problem is not yet definitely solved.

Effigy mounds were originally believed to have been for ceremonial purposes only and were not believed to contain burials. As early as 1850, however, Dr. I. A. Lapham found burials in some effigy mounds. The ceremonial as opposed to the mortuary theory was held until recently. However, in recent years with more thorough investigation it has been shown that they also were definitely burial mounds. It is very probable that the effigy mound had a ceremonial significance, but it is now certain that at least most of them were also burial mounds.

Another type of prehistoric earthwork peculiar to Wisconsin is the intaglio. These peculiar works are relatively rare. Mr. Charles E. Brown tells me that not over fifteen have been found. The intaglio may resemble either an inverted conical or effigy mound. The best existing specimen is an effigy of the panther type preserved in River Park at Fort Atkinson, which is described with others in the **Wisconsin Archeologist**, vol. 9, no. 1, pp. 5-10. An effigy intaglio in the Kletzien Mound group in Wilson Township, Sheboygan County, was examined by the Milwaukee Public Museum in 1927. It is reported by Mr. W. C. McKern⁴ as follows:

"A panther effigy intaglio, represented as disposed on the left side, head to the southeast, legs directed toward the southwest. The tail is largely obliterated due to the

⁴ McKern, W. C., "The Kletzien and Nitschke Mound Groups," **Bull., Public Museum, Milwaukee**, vol. 3, no. 4, p. 494.

long intensive cultivation of a field into which it protruded. All interior surface contours are rounded and smooth, corresponding in reverse to the surface of a mound of similar shape. The earth removed in digging the intaglio was apparently banked about the margin on all sides. This fact was determined by the discovery of a humus line, in several places excavated, below these embankments and in the same horizontal plane with the environing natural surface.

"The body of the intaglio is twenty-eight feet in length. Only about three feet of the tail is now apparent. The maximum width, along the major axis of the front legs and across the body, is 14.5 feet. The minimum width of the body, immediately anterior to the rear leg, is nine feet. The greatest depth, at a point equidistant between sides and somewhat posterior to the center of the effigy's shoulder, is 1.6 feet. The surrounding banks have a maximum height above the original surface of 1.2 feet.

"Excavation resulted in the discovery that the entire intaglio, or that portion of it now remaining, was originally lined with an artificially placed stratum of light gray sand, mottled with brown lines from water seepage, from .1 to .4 feet in thickness, deeper in the central portions of the intaglio than about the margin. This material is identical in appearance, and probably in source, to that featuring the floors of several mounds in this group. No other interior features were encountered."

The purpose of these is not definitely known, but investigation of the McClaughry Group in section 22, Packwaukee Township, Marquette County, on the shores of Buffalo Lake in 1925⁵ showed that an effigy mound (mound No. 13) had an intaglio base. This might be conceived to indicate that the intaglios are bases for mounds which were never erected. However, most mounds which have been excavated do not show any indications of having a prepared intaglio base.

The house platform mounds resemble conicals except that they are flat on top like a truncated cone. From the descriptions of early settlers it is probable that some of them at one time were rectilinear in shape, but now, after cultivation and erosion, they have become well rounded, and only the flat top remains as evidence of their type. Some flat-topped mounds have contained burials. Hence the only sure way to determine that they are not burial mounds is by

⁵ "The Neale and McClaughry Mound Groups," *Bull., Public Museum, Milwaukee*, vol. 3, no. 3, pp. 336-339, 1928.

excavation. The best known platform mounds in the state are located in the Aztalan State Park near Lake Mills, Wisconsin. The Aztalan group has been thoroughly excavated by the Milwaukee Public Museum, but the report is not yet available.

Enclosures may be circular or rectilinear in shape and usually contain gateways. Some, like those of Aztalan, are large, while others may not be over 150 yards in diameter. The surrounding wall of earth was probably in most cases the basis of a stockade, as has been proved by post holes which are often plainly visible upon careful excavation. Other enclosures probably encircled a dancing place as shown by a hard floor and evidence of a fire in the center.

All Indian groups in Wisconsin did not bury their dead in mounds. It is even possible that all individuals in mound building groups were not buried in mounds. A few prehistoric burial grounds have been located within the state and two of them have been partially excavated. One of these is the Midway site on the Onalaska Canning Company farm, near Midway, Wisconsin, and another near Oshkosh, Wisconsin. Since burial grounds are difficult to locate, they have not been very extensively investigated. But the two with which the writer is familiar have been very productive sites.

The Archeological Approach

The most important items to stress in archeological work are care, exactness, accuracy, alertness, a conscientious recording of all details, and an imagination tempered by reason. The worker can not be too careful. A careless move may break, destroy, or displace a specimen. He must be minutely exact in his descriptions, measurements, and locations. Above all, he should record all details. The value of a specimen found in a burial is not so great if it is not located in relationship to the associated burials. The best pot or pipe is practically worthless, at least so far as science is concerned, if the place in which it was found is forgotten.

The worker must have imagination enough to see things which would be overlooked by a less observant person, but not so much as to make him see things which do not exist. He must expect anything, but must not look for evidence for a pet theory so diligently that he projects that evidence

from his mind to the site on which he is working and so overlooks other important information which is present.

The Technique of Surface Survey

There are two general levels in which the archeologist may work: the surface level and the sub-surface level. It is for work in the latter that the archeologist is most famed. The word "archeologist" itself brings to the layman's mind the excavation of Egyptian tombs, the cities of Troy, and the ruins in the Tigris and Euphrates valley. However, sub-surface work is no more important to science than are the surface surveys, and whereas the former takes much more physical force, costly labor and equipment, the latter may be done on a Sunday afternoon with little cost or equipment.

The person who is interested in surface survey work should be equipped with a camera, a large map of the township, (a topographic map is best, if such can be obtained), a kit of tools including a grape-fruit knife, a trowel, a whisk broom, a varnish brush, some paper or, better, cloth sacks, notebooks containing plain and cross-section paper, steel tape, and a compass. It is very desirable to have available a transit or plain table and stadia rod.

Camp sites are usually found close to streams, rivers or lakes where spring water is likely to be convenient. One may walk along terraces just above the flood plain and look in cultivated land for chips, arrow points, knives, pottery and other camp site materials.

One should converse with the local farmers and determine if they find arrows or axes while cultivating their fields. If they do, the archeologist should go over that field (the best time being after a hard rain). Thus if it shows signs of having been inhabited, it should be marked on the map, notes written as to its exact location and accessibility, and it should be given a designating name.

The best way to describe the location of a camp site is by use of the state survey and any other distinguishing and quite permanent land marks. For instance the N. E. $\frac{1}{4}$ of the S. W. $\frac{1}{4}$ of sec. 12, about thirty rods from the left bank of Bear Creek would definitely locate a site.

It is usual to name campsites after the owner of the land upon which they are located or after some prominent geo-

graphical feature. In case of several sites on the same man's farm they may also be given a number, such as "White Camp Site, No. 2."

All artifacts found on a given site should be temporarily deposited in a sack with the locality plainly marked with ink or indelible pencil. For safety, a card with the same information should be placed in the sack. If these materials are not to be turned over to a museum immediately, each specimen should have a number placed upon it with India ink. This number should be followed by the name of the site from which it came and other information pertaining to it should be entered in a notebook. *A specimen is of no value to science unless its place of origin is known.*

On pasture land one cannot find material lying on the surface. Here, caved banks should be examined as they often yield pottery, chips, and other evidence indicative of camp sites. In such places one may find two or more kinds of sherds at different levels. In such an event, they should be placed in separate sacks, which, in addition to being marked as indicated above, should be clearly designated as to the strata from which they came. Finds such as this are of great importance for they show cultural stratification. If the worker is unable to excavate the site thoroughly in the method indicated later in this article, he ought to report it to some institution able to carry on the work.

In investigating caves or rock shelters it is well to read a few books on the geology and physiography of the region in which one is working. These will give the location of some of the better known caves. Others may be found by interviewing residents of likely regions. There are probably caves in Wisconsin yet undiscovered and waiting for the person inclined to explore them.

After reaching the cave or rock shelter one should examine the floor for evidences of occupation. In case the floor is of loose material it is necessary to dig test pits, as debris may have accumulated over the original floor. If the loose material is deep and fairly rich in artifacts it should be excavated as directed below or reported to an in-

stitution able to carry out the work. The walls of the cave should also be examined for petroglyphs.⁶

Petroglyphs are sometimes incised in the rock walls. They are often naturalistic pictures of animals, fish, men, etc., but frequently are unknown symbols or such highly conventionalized designs that one cannot determine what they represent. One must learn to distinguish between Indian drawings and the more recent initial cutting. In case petroglyphs are found they should at least be sketched, but sketching is the most unsatisfactory method of recording them. Photographs are very desirable. If they do not photograph well in a natural state one may chalk the incisions. An advantage of chalking is that in so doing one shades only the prehistoric designs so that the photograph does not record so plainly the modern signs and symbols which may be present.

Another method of securing a record of this type is by tracing. A large piece of paper may be placed over the petroglyphs and a soft crayon used to trace in the incisions. The tracing may later be sprayed with shellac and thus made permanent.

A still better method is that of making casts. For this work one needs bee's wax (if it is not to be obtained paraffin will do), cloth (preferably scrim) cut to various sizes, and burlap. The first step is to clean the wall thoroughly with a brush and then coat it with melted wax, being sure to get the wax well worked into all of the crevices. While the wax is still soft, press on the scrim. Then apply another coat of wax and add more cloth. Repeat the process several times, finishing with the burlap. After the whole has cooled, it may be easily peeled off and the impression is completed. In the laboratory the impression may be covered with plaster of Paris, which, after it has hardened, may be separated from the impression and a perfect reproduction of the wall and the incisions remains on the plaque.

In caves, one may find other things than the more common artifacts and petroglyphs. For instance, in a cave in Minnesota, birch bark scrolls were found, upon which were

⁶ Those interested in this phase of archeology should have at hand "Indian Caves in Wisconsin," Brown, Charles E., *Wisconsin Archeologist*, vol. V, no. 1, pp. 7-29.

drawn very interesting mnemonics.⁷ In a cave in Ohio a dessicated human body was found together with clothes, wrappings, etc. In archeology, it is always necessary to keep one's eyes alert for everything. All caves yielding artifacts or petrographs should be reported to a museum or the Historical Society together with a description of the materials.

In the location of mounds much the same procedure is used as in the location of camp sites. Farmers are interviewed and likely locations such as hill tops and terraces should be examined. The worker will often find mounds which the farmer has not recognized and many "mounds" will be reported which are natural. These the experienced archeologist will be able to recognize very easily.

There are a few general rules which help one distinguish artificial mounds from natural formations.

1. Mounds are usually conical, long and of regular width, or built in effigy.

2. Mounds in Wisconsin usually occur in groups. Be skeptical of single mounds.

3. Mounds of excessive size are nearly unknown in Wisconsin, the largest being eleven feet high. Local residents often mistake an erosional remnant of a flood plain for an Indian mound. These often resemble mounds, except for size but it will be noted that they are the same height as the nearby terraces.

4. Most Indian mounds are found on the stream terraces above the flood plains. Occasionally one encounters mounds which resemble artificial structures in the flood plain. In such cases a very careful examination should be made before they are designated as either natural or artificial.

5. Since artificial mounds are built of surface soil, a test pit dug in the mound and another nearby will determine if the mound in question is artificial or natural. If it is natural the top soil on the mound will not be any deeper than that on the level. If the mound is artificial the top soil will go to the level of the bottom of the top soil beside the mound (Figs. 1 and 2). Often, though not always, the old sod line is visible at the base of the mound.

⁷ This find was reported by Mr. Willoughby M. Babcock of the Minnesota State Historical Society.

6. To determine that a questionable mound is artificial does not necessarily insure it to be of Indian origin. It is often necessary to check upon it through old settlers. The writer has seen old house foundations which resemble Indian mounds. An old fence row makes a beautiful linear mound. What appeared to be an enclosure once proved upon investigation to be an old race track.

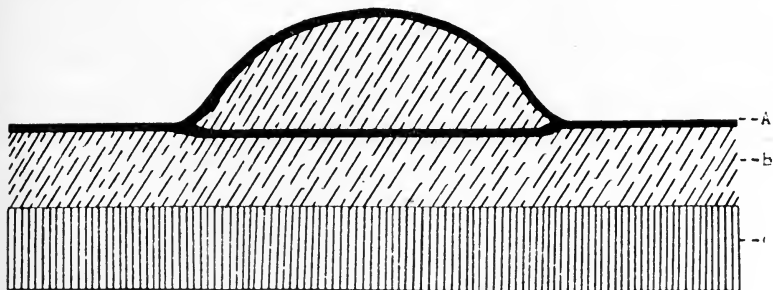


Fig. 1. Cross section of an artificial mound: (a) sod line; (b) top soil; (c) subsoil. Note the old sod line showing below the mound.

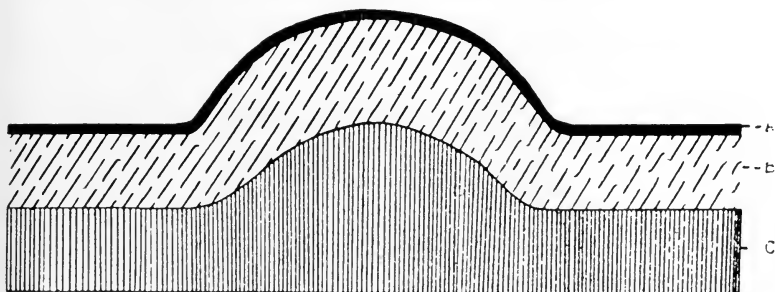


Fig. 2. Cross section of a natural mound: (a) sod line; (b) top soil; (c) subsoil. Note that the subsoil rises with the top soil and that there is no trace of a sod line at the base of the mound.

After a mound or group of mounds is located it should be surveyed. If a transit or plane table is used the group should first be surveyed as a whole, i. e., each mound located in its relation to the others. At this time each mound should be numbered. The group should then be located with reference to a cornerstone or other permanent land mark. The next step is to survey the mounds individually. In the case of small conicals it is sufficient to survey the distance from the reference point to the edge of the mound in the four cardinal directions. One should determine the elevations of each and if the reference point is not the high-

est point of the mound a fifth point should be established there.

In case of a linear mound, the major axis should be established and elevation should be taken of the two margins at right angles to each ten-foot point along the major axis (Fig. 3). The same process is followed with the oval and polywog mounds.

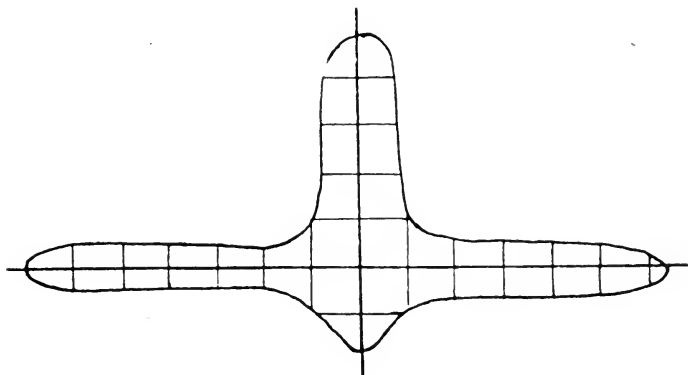


Fig. 3. Diagram of a bird effigy mound, showing method of recording elevations for any effigy or linear mound.

When surveying effigy mounds the major axis should first be established and other straight lines laid out from this where necessary. Measurements and elevations should then be taken at right angles to each ten-foot interval or at such other points as are necessary to show irregularities.

The whole group should then be charted on cross-section paper. If part of a mound has been destroyed, that portion may be projected if indicated by broken lines. The number of each mound should be indicated and each reference point established should be shown and identified. All records obtained in making the survey should be filed together where they may be easily located for reference. It is advisable also to send a copy to a museum.

Each group of mounds should be named and located in much the same manner as the camp sites.

Some archeologists prefer a plane table to a transit, as it is somewhat simpler to use and the map is projected at the same time the survey is made.

In case that a transit or plane table is not available a less accurate survey can be made by the use of a compass

and tape. While this is not as desirable as a more accurate survey it is far better than none at all. The important thing is to have the sites recorded and described as well as possible together with explicit directions as to how they may be reached.

Burial grounds are much more elusive than any of the other remains discussed above. Indications of them will be gleaned through conversations with farmers who have uncovered bones during the cultivation of their land or while laying tiles, digging wells, cisterns, etc. While exploring caved banks one may find bones protruding from the cliffs. All of this, of course, may be an indication of burial grounds. It may be that the remains found are those of an individual buried in other than a regular burial ground. However, thorough excavation is the only certain way of discovering whether or not the site is a true burial ground. All indications should be reported to institutions able to undertake more thorough work.

For any one to be successful in archeology it is necessary for him to gain the confidence of the inhabitants of the region in which he expects to work. Farmers are often very skeptical of those who wander over their land in search of such trivial objects as arrow points and potsherds. But it is essential to win their confidence and interest.

Another important field for the archeologist is the survey of various private collections. There are many people who are interested in Indian artifacts only as curios. They often have materials and information which are very valuable to science and which are, unfortunately, often lost. Every collector should be won to the cause of science. This is not difficult for the tactful and honest archeologist. The collector should be taught to keep his specimens catalogued, and persuaded to cooperate with and keep in touch with some museum. The latter statement cannot be too strongly emphasized. In order to piece together Wisconsin prehistory we must know the whereabouts of the pieces.

The Technique of Excavation

A short explanation of the structure of stratified camp sites will help to explain the necessity of the slow and somewhat tedious method of excavation.

A location for a camp or village site is chosen, we shall say, by one of the first groups of Indians to live in the state. They may have lived there for many years during the course of which time refuse was thrown out, implements lost, etc. Meanwhile, the accumulation of humus built up the land surface at a definite rate which varies with local conditions. Later these people may have been driven out of the region or voluntarily moved away and other groups found the same place a favorable camp site and the process of accumulation continued. Such conditions resulted in one layer of cultural determinants being superimposed on another, with the oldest stratum at the bottom and the most recent on top. Such a discovery is of great importance as it indicates a sequence of cultures within that region.

In excavating such sites it is best to lay out trenches three feet wide and from ten to twenty or more feet long according to the size of the force of laborers. The soil should be taken off in three-inch layers and sifted through screens. The specimens from each layer should be placed in a separate sack and marked as to site, trench number and layer number; for instance: "White Campsite, No. 2, Trench 2, Layer 12, 36 inches below the surface." Such a procedure would put the more recent material in smaller numbered sacks and the oldest material in the higher numbered sacks. Layers should be removed until the paucity of refuse indicates that the bottom of the site has been reached.

The screens for sifting may be made of wire netting of a size best suited to the soil conditions. It is sometimes necessary to sift the soil twice and use two different gauges of screen.

Whenever a rather large collection of sherds is found together it is well to clean them off carefully while in situ, photograph them, and place them together in a sack labeled as indicated above, and, in addition, numbered as a "feature." Anything which appears to be related should be photographed, labeled, and placed in a sack plainly marked. If it is not a skeleton it should be given a feature number. A "feature sheet" should also be filled out.

When a burial is encountered it should be cleaned out in situ, the outlines of the pit determined, and the whole pho-

tographed. The burial should be numbered, and each individual within the burial given an individual number. Any associated specimens should be photographed, numbered as a feature accompanying the burial and individuals, and placed in a sack labeled as to trench level and as an association with burial number and individual number, if the latter can be determined. The whole should then be charted according to scale on cross-section paper. Any whole bones or parts of a bone which may be of value to the physical anthropologist should be preserved with a full record as to site, level, burial number and individual number.

In the excavation of the floors of caves the same technique as that used in excavating camp sites should be followed so far as conditions will allow. At least the floor should be removed by thin lateral layers and sifted through screens.

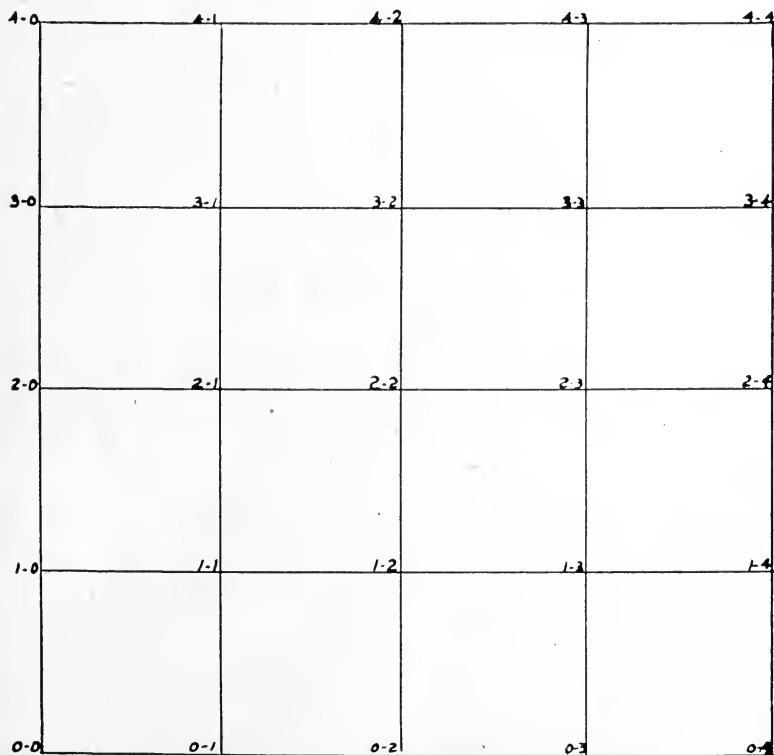


Fig. 4. Chart showing method of surveying a burial ground before excavating. Stakes observe an interval of five feet.

In excavating burial grounds the area should be surveyed and laid out in squares. Five or ten-foot squares are usually found most convenient. Each stake should be numbered starting with the southwest corner as 0.0 and numbering east, 0.1 0.2, 0.3, etc., to the end, and north 1.0, 2.0, 3.0, etc. The other pegs are numbered by having the first number that of the stake directly west of it on the north and south base line, and the second number that of the stake directly south of it on the east and west base line (Fig. 4). Each square takes the number of the stake in its southwest corner. The elevation of each stake should be taken in relation to an established point.

After this is completed excavation may be started. The ideal method is to assign each man to a square and proceed with a trench from one or two of the sides, in accordance with the size of the work laid out, and number of workers obtainable. By this technique, nothing is overlooked. In case of a limited amount of time, the less thorough method of alternating sections, i. e., omitting every other section may be used.⁸ In this way more ground may be covered, and, by watching the sides of the trenches for indications of burials, most of those in the intervening sections will be noted and can be excavated.

As to the actual technique of digging, one has a choice of three methods; namely, taking a vertical cross-section, a horizontal cross-section, or a combination of both. Those using the vertical method, would first dig on the edge of the section to the bottom, i. e. to at least six inches below the top soil, then proceed to work in by slicing off thin vertical layers, keeping all walls of the trench straight and clean, in order to be able to see any indications of disturbed soil to the side or below the trench.

Those preferring the lateral cross-section would remove the soil in thin horizontal layers being sure to keep the floor and walls of the trench straight and clean. The writer prefers this method. After one becomes familiar with the site it may be that the conditions will permit him to remove some of the top soil by the ordinary vertical method of digging providing he is careful, takes thin layers, and keeps the floor of the trench clean.

⁸ In this case it is advisable to lay out the site in five foot sections.

All loose camp site material should be placed in sacks labeled as to site and trench number. Where there are signs of stratification, levels should be taken. Features should be dealt with as described above, burials should be carefully cleaned out and the limits of the pits should be determined (this can usually be detected as disturbed earth is darker than the surrounding soil). The burial should be numbered, the whole photographed, burial notes taken, levels ascertained and physical data observed before the burial is removed. That part which is of value should be preserved and marked so that it is easily identified as to site, burial, and individual number. After the removal of the burial, excavation should continue to the bottom of the pit as quite often material is placed beneath the burial⁹ and would otherwise be missed.

The entire area of the pit should be cleaned out before anything is removed for in many cases there are several individuals in one pit.

When only alternating squares are excavated, it is especially necessary to keep the walls *straight* and *clean*, for one may then detect any indications of disturbed soil, which indicate a possible burial in the intervening section.

Mound Excavation

A mound should be prepared for excavation by surveying and laying it out in five or ten-foot sections. One of the best methods of doing this is to set the instrument in such a position that north, south, east and west lines may be established so that they just cut the edge of the mound. After these are established, the instrument may be set at the opposite corner so that similar lines will intersect those already determined. A rectangle is now constructed and a tape may be used to measure the ten-foot intervals on all four sides. After this a chalk line is stretched north and south from all pins and east and west from all pins, so that the points of intersection of the lines when extended to the base of the mound will mark the corners of the ten-foot sections.

⁹ When cleaning out the burial, the worker should go below the level of the skeleton to the bottom of the pit, if that is not so far as to spoil the photographic effect. This will show all associations possible in their relation to the burial when photographed.

The stakes should be numbered in the same manner as described for the burial ground and the elevation at each taken.

The most thorough technique is that of removal. In this case each worker is assigned one of the squares. If the mound is large and enough men are present it is best to approach the center from all sides. The excavation should go well below the sod line where it is present, and elevations of it should be taken below each stake. This procedure gives the exact height of a mound at each stake. The floor of the trench should be well cleaned in order to assure the worker of the presence or absence of any important information. Anything located below the sod line is either pre-mound or intrusive and the discovery of any burial, or artifacts there may give valuable information as to cultural sequences. Burials below the sod line will be marked by darker soil. This will be very evident on a clean floor but almost indistinguishable on a rough one. Here, as with the excavation of the burial grounds, the worker has his choice of using the vertical or horizontal cross-section. In many cases the sod has been removed before the mound was built. Thus the excavation must go well below the original top soil.

While excavating the mound, the worker must watch for intrusive burials as these too are indicators of a sequence of cultures. They may be distinguished by a shaft of disturbed soil which extends from the top of the mound.

The burial may be placed in the mound material directly at the base of the mound or in a pit below the mound (Fig. 1). The worker must expect it anywhere. Sometimes the mounds themselves are stratified, i. e. mound built upon mound.¹⁰

When a burial or feature is discovered it should be well cleaned and given a number. The outlines of the pit, if there is one, should be determined, the whole photographed, a drawing made to scale, and notes taken or data sheets filled out. Steps should be taken to preserve the material which should be stored in sacks or boxes and labeled as to the mound group, and mound number from which it came; also feature number, and burial number with which it is as-

¹⁰ This has seldom been encountered in Wisconsin, but is fairly common in Illinois.

sociated. In the case of burials containing more than one individual, each one should be numbered.

If the owner objects to the removal of the mound, or if, due to the pressure of time, a quicker method must be used, the most of the material and information can be obtained by the trenching method. A ten to twenty-foot trench may be put through the major portion of the mound and five-foot trenches extended from the ends of the large trench beyond

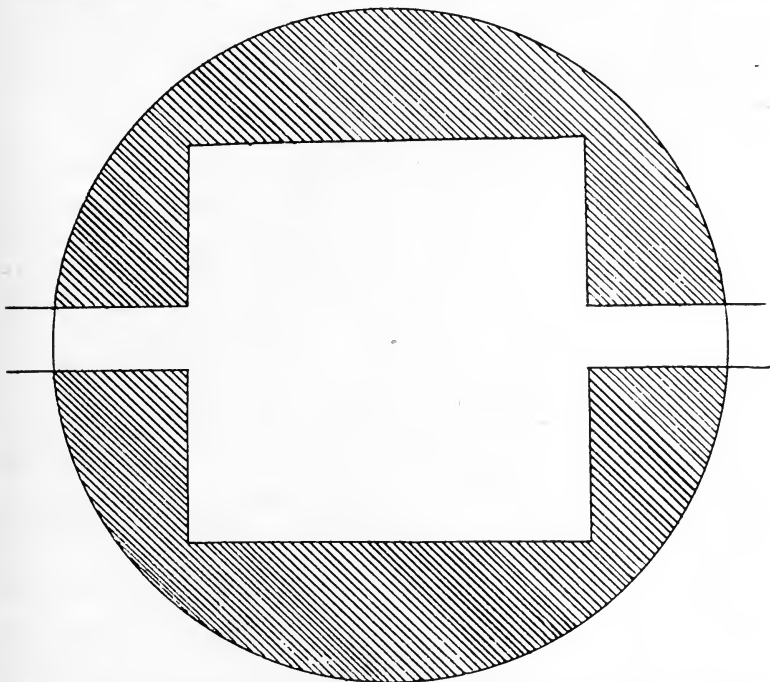


Fig. 5. Lateral cross section of a conical mound at the floor level (shaded portion), showing the disposition of the centrally broad trench (unshaded portion) with narrow marginal extensions.

the margin of the mound (Fig. 5). This gives a complete cross-section of the mound and while one may miss some loose artifacts in the mound material, the main features and details of the mound construction will be determined.

In excavating a linear mound either of the two techniques above described may be used. In trenching a linear mound the trench should be of uniform width throughout the entire length of the mound.

An effigy mound may be either removed or trenched. Through experience with effigy mounds, it has been found

that the features usually occur along and at the intersections of the major and minor axes.

All excavations should be carried out very thoroughly and carefully. The materials are old and often rotten. A careless thrust of shovel or trowel may break or even destroy a valuable specimen. Some important finds may be easily overlooked. Cloth, pearls, leather, and bark are sometimes preserved by their contact with copper, but in such a poor state that a careless worker might completely overlook them. The writer has seen mounds built over pits the soil of which was piled around the edges of the excavation. The soil in the banks was of a different texture than that of the mound and in the removal of the mound this bank was left. A more complete conception of the method of its construction resulted. Careless workers might have missed this bit of information. Often lensing is present in a mound and should be recorded. This is evidently caused by the different loads of earth which partially retain their shape and identity. In one mound in Ohio, the basket in which the dirt was carried had been thrown in with its load and the actual impression of the basket remained. The various kinds of mottling in the cross-section are of importance and can only be seen by keeping the walls clean. Post holes may be determined by the dark spots they have left. Everything concerning the structure of the mound should be observed and accurately recorded in notes and charts.

The first important rule for the archeologist is: "Keep your eyes open, keep the walls and floors clean, and very carefully examine anything which appears to be different". The second rule is: "Record, photograph and save everything possible".

Do not hurry to reach the feature for in so doing you may miss something of great importance. It may seem unnecessary to clean the floor of the trench below the sod line but if this is neglected, you may pass over something of value. It may be that just a corner of a pit projects from under the wall of the trench and to get to its feature would require the removal of loose dirt just thrown out of an eight-foot trench, but it is possible that here lies important information. If you do not thoroughly complete the project, much of the reward for your work may go to others or be permanently lost.

THE ART OF THE AMERICAN INDIAN

Herbert W. Kuhm

It is significant that all races, and primitive peoples especially, exhibit the wish somehow to inscribe their racial autograph before they depart. It is the Indian who has written down the first known history in America.

Americans of our time and of times to come can know little or nothing of their spacious land until they have sought some degree of intimacy with their first artistic relative, the Indian. You will travel over many continents to find a more beautiful artistry than our red man offers. We go about the world seeking out every species of life foreign to ourselves for our own esthetic or intellectual diversion, and yet we neglect, on our very doorstep, one of the most remarkable recordings of beauty that can be found anywhere, namely the artistry of the American Indian.

The Indian is an artist of the very first order. We have nothing more native at our disposal than the beautiful creations of this people, and should eagerly accept their contributions to our culture. We must not forget that the Indians are a vastly older, and in symbolic ways, an infinitely more experienced race than our own. Soon we shall see them recorded only on tablets of stone, along with the Egyptians and the other races that have perished.

It is the red man of America who knows with an almost flawless eye the natural harmonies of the life that surrounds him. He has for so long decorated his body with the hues of the earth that he has grown to be a part of them. He is a living embodiment in color of various tonal characteristics of the landscape around him. He knows the harmonic values of a bark or a hide, or a bit of broken earth, and of the natural unpolluted coloring to be drawn out of various types of vegetable matter at his disposal. Even if he resorts to our present-day store ribbons and cheap trinkets for accessories, he does it with a view to creating the appearance of racial ensemble. He is one of the essential decorators of the world. A look at his totem poles, pottery, blankets and wearing apparel will convince you of that.

He knew how to take blades of grass, strips of bark, the juice of berries and stains from roots and put these together into an exquisite basket; he could take clay, mold it, color it, temper and fire it with only the crudest of implements and evolve some of the world's most beautiful pottery; he could take raw wool, dye it with his natural earthy colors, and weave in rainbow tints and sunset hues, his inmost sacred beliefs of how the world began and life came to be; he took shells, feathers and animal skins and made them into ceremonial robes that kings might wear with pride.

What of these remarkable talents of the Indian? Have they not a place to fill in the culture and industry of our country? We are a people of great mechanical and inventive genius, but we are not naturally song-makers, poets, or designers. Can we afford to lose for posterity the sincere and spontaneous art impulse of so naturally gifted a race? The undeveloped talents native to the aboriginal American are precisely those in which the Anglo-Saxon American is deficient. Although far ahead of Europe in labor-saving devices, we are far behind in all art industries. Our patterns and designs are largely imported. And yet, here among us, downtrodden and by us debauched, is a people of real creative artistic genius—our first Americans. Yet our selfish interests would seem to declare that this once proud race must perish. Would we not do well at least to find out what these people really are before we declare that the natural law of the survival of the fittest pronounces their doom?

In America as elsewhere it has been the same old story. The Anglo-Saxon smashes the culture of the primitive people that get in his way and then, with loving care, places in museums the beauty he salvages from the wreckage he has wrought.

Unfortunately for us, the art of the early Wisconsin Indians reached its highest development in perishable materials which are, therefore, no longer to be found. The finest of this was the embroidery and weaving in dyed deer hair or the colored quills of the porcupine. To the Wisconsin archeologist remain, however, occasional carved or etched stones and bones, sherds of pottery vessels, effigy pipes, bones, stone and shell ornaments, and chipped flints of remarkable symmetry.

When we visit our museums and view the handiwork of the American Indian exhibited there we cannot withhold our admiration for the beauty of the primitive workmanship:—as in the variegated designs of the effigy pipes in the George A. West collection in the Milwaukee museum, or the grace of the planes of the bird stones, the intricately woven and beautifully designed fabrics, the exact rightness and restraint in surface decoration of the pottery, the perfection and delicacy of weaving in the garments, even to the handiwork of those ancient artisans who delved at Aztalan. As we view all this we are convinced that the American Indian was a true artist.

In spite of the heavy business of procuring food and shelter, he had a margin of time for a deep and personal touch with beauty. It surrounded him at all times. He wove it into his fabrics, chipped it into flint, ground it out of stone, tamped it onto his pottery, worked it into his bird stones and gorgets, carved it into his artifacts and painted it onto his dwelling. The Indian was daily in intimate contact with beauty.

The art of the Indian should not be judged by the white man's yard stick. It was created from a different racial point of view. Perhaps there remained the subconsciousness of the Indians' memories of his Asiatic origin. There was something archaic in his feeling and it seems to have some subtle relationship with old Mongolia. The Indian craftsman, whether it be the Navajo in his blankets, the Pueblo in his pottery, or the plainsman in his beadwork and magnificent ceremonial costume, has a fine sense for decorative design and for harmony in tone and color.

No doubt the most primitive specimens of Indian art are the simple images inscribed upon smooth-faced rocks, both in the open and in caves. These rock-scratched images vary from indecipherable scrawls to well-executed animals, floral forms and figures that are symbolic in meaning.

Many caves in Wisconsin reveal evidences of aboriginal habitation, having walls inscribed with rude figures representing lightning and rain, the moon, sun and stars, the thunderbird and panther, and animal effigies among which bison, lynx, bear, badger, elk, otter, heron and rabbits have been recognized. Some caves were covered so completely

with these pictographs that the drawing extended over the roof. Some inscriptions are several feet in length and conceivably depict the exploits of warring or hunting parties.

The Indian artists made much use of symbols in their decorative schemes. There are decorations, for example, that are appropriate to the costumes of men, others to those of women, and again others for children; there are marks and crests that designate clan and tribal kinships; there are insignia that mean war and peace, life and death, joy and grief, feasting and fasting. The same is true even of utensils: certain emblems belong to the weapon, others to the water-jar or the food-basket, others to the medicine pipe, or the ceremonial drum. In fact, pipe and tomahawk, feathers and blanket, beadwork, quillwork, facepaint, and mask, all combine into a symbolism of colors and shapes which are in themselves a portrait of the tribesman's life.

The range of this symbolic expression naturally varies greatly among differing Indian groups. With some it amounts to little more than a differentiation of costumes for the sexes. With others, as on the Northwest Coast, it attains to an elaboration of totemic heraldry that is quite comparable to that of the Medieval chivalry of Europe. Again, as among the Pueblo, it becomes an elaborated ceremonial symbolism, primarily religious, and akin to the symbolisms of Buddhism and Christianity. While for a third example, in the meticulously elaborated warrior symbolism of the Great Plains region we have a language of prowess that is as eloquent as words.

In the Southwest nearly all the paintings are ritualistic in inspiration; the ceremonials and the beautiful costumes of the dancers form the dominant themes, and even where the theme is secular, as of a buffalo hunt or a mounted warrior, still the art is close to the spirit of the ritualism that pervades all Pueblo life. But on the Plains the whole cast of the art is different: here the picture is chiefly a glorification of the warrior; the picture is of the deed of arms, the exploit; and it is meant to be painted on blanket or tipi as the outward proclamation of the valor and prowess of the man it celebrates.

"Each people," said a learned Frenchman, "through its great artists affirms its infinite faith, reveals its manners of

understanding life and enriches just so much of the patrimony of the world."

Hence the art of the American Indian, which springs from the very American soil itself, can enrich our patrimony, and if the striking characteristics of that art should eventually be absorbed into the artistic expression of our country, they will weave into the fabric of our national culture a strand of color instead of adding to the prevailing monotone of gray.

DISCUSSION AND CORRESPONDENCE

Prehistoric Copper Artifacts

In the last issue of the Wisconsin Archeologist there appeared an interesting article by Dr. Anton Sohrweide on "The Origin and Distribution of Copper Artifacts." Included in this paper were a few statements which recent investigations have proven to be without substantial foundation, and it seems appropriate at this time to introduce data which might assist in clearing up some of these much disputed questions.

Dr. Sohrweide quotes from C. E. Brown's paper on "The Native Copper Implements of Wisconsin" which appeared in Volume 3, No. 2 of the Wisconsin Archeologist as follows:—"A provisional description of the territory in which such artifacts have been found up to the present time may be given as extending from about the middle of Milwaukee County, northward to Door County, thence westward to the Wisconsin River or slightly beyond, thence southward along this stream to Dane County and eastward to Milwaukee County, the starting point." In the twelfth annual report of the Bureau of Ethnology which was published in 1894, Cyrus Thomas reported that he found copper artifacts in mounds which he excavated in Vernon and Crawford counties, and among these artifacts were beads, plates, and pendants of copper. During the past five years the archeological expeditions sent out by the Milwaukee Public Museum have obtained prehistoric copper artifacts from mounds and campsites in Trempealeau, La Crosse, Vernon, and Crawford counties. In the Milwaukee Public Museum there are on display copper artifacts which were obtained from counties outside of the general area mentioned by Mr. Brown; these counties are Vilas, Iron, Barron, Forest, Trempealeau, Richland, LaFayette, Rock, Racine, and Walworth. In view of these facts we may state that prehistoric copper artifacts have been found in many parts of the southern two-thirds of Wisconsin, and that these artifacts have also been found in Iron, Forest and Vilas counties, on the northern border of the state.

Dr. Sohrweide also states that "copper is found not infrequently in burial mounds, but there is no way to determine whether these structures are post-Columbian or whether the burial occurred years after the erection of the mound." It is an ethnological observation that trade materials of European manufacture frequently reached the interior of North America before the general advent of the traders in those regions, and that the white men's materials rapidly superseded the primitive elements of the material culture of the native inhabitants. When the historic era opened in Wisconsin the Indians of this region were in possession of a considerable quantity of material of European or colonial origin, and many of these materials were buried with the dead. If, in a given mound, no objects of European or colonial origin are found, is it not logical to believe that the mound and the burial which it contained, if the burial be inclusive, are at least culturally prehistoric? The archeological field parties of the Milwaukee Public Museum have thoroughly excavated between two and three hundred mounds in various parts of Wisconsin, and many of these mounds contained copper artifacts, and yet not a single mound has been encountered in which any inclusive feature has shown any materials of historic origin. In every instance where historic burials have been found in mounds it has been shown that the burials were not inclusive but that they were made after

the erection of the mound. In the vast majority of cases it is a relatively simple matter to identify an intrusive burial, for careful mound removal or trenching technique generally reveals the outline of the intrusive pit. This is not a mere theory but an actual practice which has proven successful through a period of fifteen years of intensive archeological work in Wisconsin.

Dr. Sohrweide quotes Neil M. Judd in the following words: "Prior to the advent of the Europeans, our American Indians hammered out of copper ore all their copper artifacts, however thin. Sheet copper was unknown to them before the whites came; then pots and kettles furnished the principal source." The above statement seems to indicate a lack of specific knowledge on the subject of prehistoric sheet copper, for there are two very important points to be kept in mind. The first point is that the pots and kettles referred to by Mr. Judd were almost always made of brass and very rarely of copper. I invite immediate correction if I am in error. The second point is that there are in the Milwaukee Public Museum many artifacts of sheet copper which have been obtained from prehistoric mounds in Wisconsin within the past fifteen years. In the bulletin of the Milwaukee Public Museum entitled, "A Wisconsin Variant of the Hopewell Culture" by W. C. McKern, there are several excellent illustrations of some of these sheet copper artifacts. It will be a pleasure to show these specimens with all pertinent data to those who are interested in the subject of prehistoric sheet copper. However, it is not necessary to consider only the data collected in Wisconsin. In the *American Anthropologist*, N. S., Volume 5, Number 1, published in 1903, there appeared the classic discussion on copper from the mounds by Messrs. Moore, McGuire, Putnam, Dorsey, Moorehead, and Willoughby. In the papers presented by these men Drs. Sohrweide and Judd will find evidence in quantities which might possibly induce them to alter their views regarding prehistoric sheet copper.

It is hoped that this criticism will be thoroughly examined for flaws and the details published in succeeding issues of the *Wisconsin Archeologist*, for it is only through specific and candid discussion of available data that we can hope to clear up the often perplexing problems of archeology.

ALTON K. FISHER,
Milwaukee Public Museum.

ARCHEOLOGICAL NOTES

Meetings

At the regular meeting of the Society held at the Milwaukee Public Museum on Monday evening, September 19, 1932, there were over fifty members and guests present. President W. C. McKern presided. Dr. H. W. Kuhm acted as secretary in the absence of Secretary Charles E. Brown. Dr. Kuhm announced that at the meeting of the Executive Board, held earlier in the evening, and at which there were present Messrs. McKern, Gilman, Richter, Barrett, Kastner, West, Schoewe, Kannenberg and Ringeisen, and Mrs. Theodore Koerner, it was decided that the amendment to the Constitution proposed and adopted at the May meeting of the Executive Board and at the regular meeting of the Society of the same date was illegal as it required a majority vote of the membership for its passage. This proposed amendment increased the number of the directors of the Society from ten to thirty. On motion of Director Gilman it was voted to postpone action on the amendment until the annual meeting of the Society. Mr. L. C. Proesch, of Evanston, Illinois, had been elected an annual member of the Society.

Mr. Theodore T. Brown, superintendent of the Neville Public Museum, Green Bay, gave an illustrated lecture on "The Archaeology of the Green Bay Region." In this rich and interesting region the speaker has been for several years conducting investigations of village sites, mounds and burial places, and also conducting historical investigations of its more recent Indian occupation. The Neville Museum contains quite extensive archaeological and ethnological collections assembled in this part of Wisconsin. These the speaker described, also exhibiting some notable specimens recently obtained.

Dr. Kuhm spoke of the American Indian as an artist and called attention to the exhibit of Allied Indian Arts then being shown at the Milwaukee Art Institute. This consisted of pottery, jewelry, fabrics, sculpture and paintings. Mr. White reported on the finding of five Indian burials in a gravel pit near the intersection of the Green Bay and Green Tree highways near the city. Mr. G. R. Zilisch, of Hustisford, exhibited portions of a beaded garment from an Indian grave. Mr. M. C. Thompson, of Oconto Falls, exhibited a copper knife, a celt and a pottery vessel found at Horns Pier near Sturgeon Bay; Mr. R. S. Van Handel of Sheboygan exhibited an effigy head from a pottery vessel, and Mr. C. G. Schoewe, an Indian roach headdress and a wooden bowl. Mr. Arthur Kannenberg displayed a pottery vessel and a shell bead obtained from an Indian burying ground on the Karow farm on the Lake Winnebago shore near Oshkosh. Dr. Barrett reported that he had investigated a rumor that the intaglio effigy preserved in River Park at Fort Atkinson was being destroyed. This was found to be untrue; the effigy was in fine condition and well preserved.

There were about 150 members and visitors present at the meeting of the Wisconsin Archeological Society held at the Milwaukee Museum on Monday evening, October 17, 1932. Among this large audience were many Indian men and women. Secretary Brown reported on the meeting of the directors. The death of Mr. Guy V. Deering of Columbus, an old member of the Society, had been reported. Mr. Paul Scholz of Milwaukee had been elected an annual

member. Mr. Huron H. Smith reported on the programs arranged for the coming meetings of the Society.

Mr. William J. Kershaw delivered an interesting address on "The Plight of the Indian" in which he called attention particularly to the neglected and poverty stricken condition of some thousands of Wisconsin Indian people. Mr. Kershaw has been for years an ardent advocate of the rights of these native Americans. Mr. Peter Powlas, of Milwaukee, an Oneida Indian gentleman of prominence, followed Mr. Kershaw with an interesting talk on the history of the Wisconsin Oneida, located near Green Bay, and on their present condition. The addresses of both speakers were heartily applauded by their audience. On the motion of Mr. Smith both were elected honorary members of the Society. Dean Drake of All Saints Cathedral, Milwaukee, made a plea for the sympathetic understanding of and brotherhood with the suffering Wisconsin redmen.

At the close of the meeting Mr. Kermit Freckman exhibited some fine drawings made by himself of several groups of Indian mounds located at Pleasant Lake in Waushara County. Mr. C. G. Schoewe displayed a peyote rattle and fan obtained from the Wisconsin Potawatomi.

Obituary

Guy V. Deering of Columbus, Wisconsin, died in his home in that city on June 9, 1932. Mr. Deering was for many years a member of the Wisconsin Archeological Society and was deeply interested in its work although attending but few of its meetings. He was a son of Capt. Oscar Deering, a Civil War officer, and was born at Columbus, September 28, 1871. He was an alumnus of St. Johns Military Academy at Delafield. Mr. Deering was at the time of his death the president of the American Trapshooter's Association. He was a Mason and also a member of the Modern Woodmen and the Knights of Pythias. He is mourned by a large number of friends throughout the state.

• Field Notes

Mr. Theodore T. Brown, Superintendent of the Neville Public Museum at Green Bay, has recently discovered a fish effigy pipe of rare and interesting workmanship. A detailed report on this fine specimen will probably appear in a subsequent issue of the *Archaeologist*.

Messrs. A. P. Kannenberg of Oshkosh and L. J. Dartt of Montello, while excavating a village site about four miles north of Oshkosh on the Karow farm, unearthed approximately fifty primitive burials. For the most part the skeletons were extended in the flesh, prone on the back. With the burials were found four fine pottery vessels, two intact shell spoons, each marginally decorated by means of serrations, two biconical stone pipes and many other interesting and informative articles. The types of burial and the objects associated with the dead testify that the people buried here possessed what is known as the Lake Winnebago variant of the Upper Mississippi culture. There is a considerable array of facts to support the theory that this was the culture of the prehistoric Winnebago Indians.

Three more attractive pottery vessels, in addition to four pots previously found in the same area within the year, have been unearthed by Messrs. Geo. L. Pasco of Ripon and Walter S. Dunsmoor of Markesan as the result of investigations at a number of sites in Green Lake County. Two of the three vessels were found in one mound, one associated with a burial. The third pot, for which sherds were found representing about one-half the vessel, was encountered in a sand blow. This pot has one of the most elaborately cord-imprinted decorative patterns about the rim that is known for

the Wisconsin area. Materials of outstanding interest other than pottery were likewise discovered. A report covering the results of these investigations has been promised for the Archeologist.

Publications

The Denver Art Museum Department of Indian Art, Fredric H. Douglas, curator, has printed six additional Indian leaflets bearing the titles: Modern Pueblo Indian Villages, leaflets 45-46; Hopi Indian Pottery, Leaflet 47; The Klamath Indians, Leaflet 48; Long Island Indian Tribes, Leaflet 49; Long Island Indian Culture, Leaflet 50. These may be obtained at small expense by writing to Mr. Douglas.

The July issue of the Ohio Archaeological and Historical Quarterly, Vol. 41, No. 3, 1932, contains two papers of probable interest to local students: (1) Excavation of the Coon Mound and an Analysis of the Adena Culture, by E. F. Greenman; (2) Outdoor Guiding in History and Prehistory, by Carl E. Guthe.

Melvin R. Gilmore is the author of: The Ethnobotanical Laboratory at the University of Michigan, Occasional Contributions from Museum of Anthropology, University of Michigan, Vol. 1, Ann Arbor, 1932.

A recent contribution by W. B. Hinsdale relates to the nearby Michigan field: Distribution of the Aboriginal Population of Michigan, Occasional Contributions from Museum of Anthropology, University of Michigan, Vol. 2, Ann Arbor, 1932.

A report on the "Exploration of the Etowah Site in Georgia," by Warren K. Moorehead, describes the results of work at one of the most important southern sites ever to be examined by archeologists. Phillips Academy Dept. of Archaeology Etowah Papers, Vol. 1, 178 pp., Yale Univ. Press, New Haven, 1932.

Those interested in the Eskimos are advised to read: Intellectual Culture of the Copper Eskimos, by Knud Rasmussen, Danish Expedition to Arctic North America, Rept. of the 5th Thule Expedition, Vol. 9, 350 pp., Copenhagen, 1932. Price Kr. 12.00.

One of the initial publications on the archeology of the western plains is: Archaeological Survey of Eastern Colorado, 2nd Rept., by E. B. Renaud, Univ. of Denver Dept. of Anthropology, 1932.

The American Anthropologist for October-December, 1932 (Address E. W. Gifford, Dept. of Anthropology, University of California, Berkeley, Calif.), contains the following articles: Ethnological Value of the De Soto Narratives, by John R. Swanton; Proboscis Statue from the Isthmus of Tehuantepec, by Gladys A. Nomland; Spaniards and the Sweet Potato in Hawaii, and Hawaiian-American Contacts, by John F. Stokes; The Archaeology of Environment in Eastern North America, by Paul B. Sears; The Archaeology of East Texas, by J. E. Pearce; Miscellaneous articles by Richard Thurnwald, J. H. Driberg, T. S. Chen and J. K. Shryock, Melville Jacobs and Frances Densmore.

One of the earliest documents known relating to the history of Mexico, concerning the years 1547-1577, by Fray Bernardino Sahagun, has just been translated from the Spanish version of Carlos Maria de Bustamante by Fanny R. Bandelier and published by the Fisk University Press, Nashville, Tennessee, 1932. Price \$3.50.

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NEW SERIES

No. 2



PUBLISHED QUARTERLY BY THE
WISCONSIN ARCHEOLOGICAL SOCIETY
MILWAUKEE

WISCONSIN ARCHEOLOGICAL SOCIETY

The Society is a state department, receiving a part of its support from the state. Its funds are under state control. Its work is well and widely known. It has received the approval of leading American archeologists, who agree that it deserves the full support of all Wisconsin citizens interested in the state's archeological history.

The Society's activities comprise the location, recording, investigating and preservation of Wisconsin Indian remains, folklore and history, all of which are rapidly disappearing and must be recorded and saved immediately if ever.

Through its efforts many fine groups of Indian earthworks and other aboriginal monuments and remains have been permanently preserved to the public. Most have been marked with descriptive metal tablets. Others are being protected. Surveys and explorations have been conducted in many sections of the state.

It is also engaged in encouraging the establishment of public museums and collections and in discouraging the manufacture and sale of fraudulent antiquities.

Regular monthly meetings of the Society are held during the months September to May, inclusive, in the Trustees Room of the Milwaukee Public Museum. Meetings are open to the public. No regular meetings are held during the months June to August, inclusive. Special field meetings are occasionally held during the vacation months.

The results of its research and other activities are made known through its regular quarterly publication, *The Wisconsin Archeologist*. Thirty volumes have appeared. The Society has a large membership distributed through every part of the state.

It is co-operating to the fullest extent with all of the various scientific and educational organizations and institutions of Wisconsin.

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Wisconsin Archeological Society

Milwaukee, Wisconsin

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and preservation of Wisconsin antiquities

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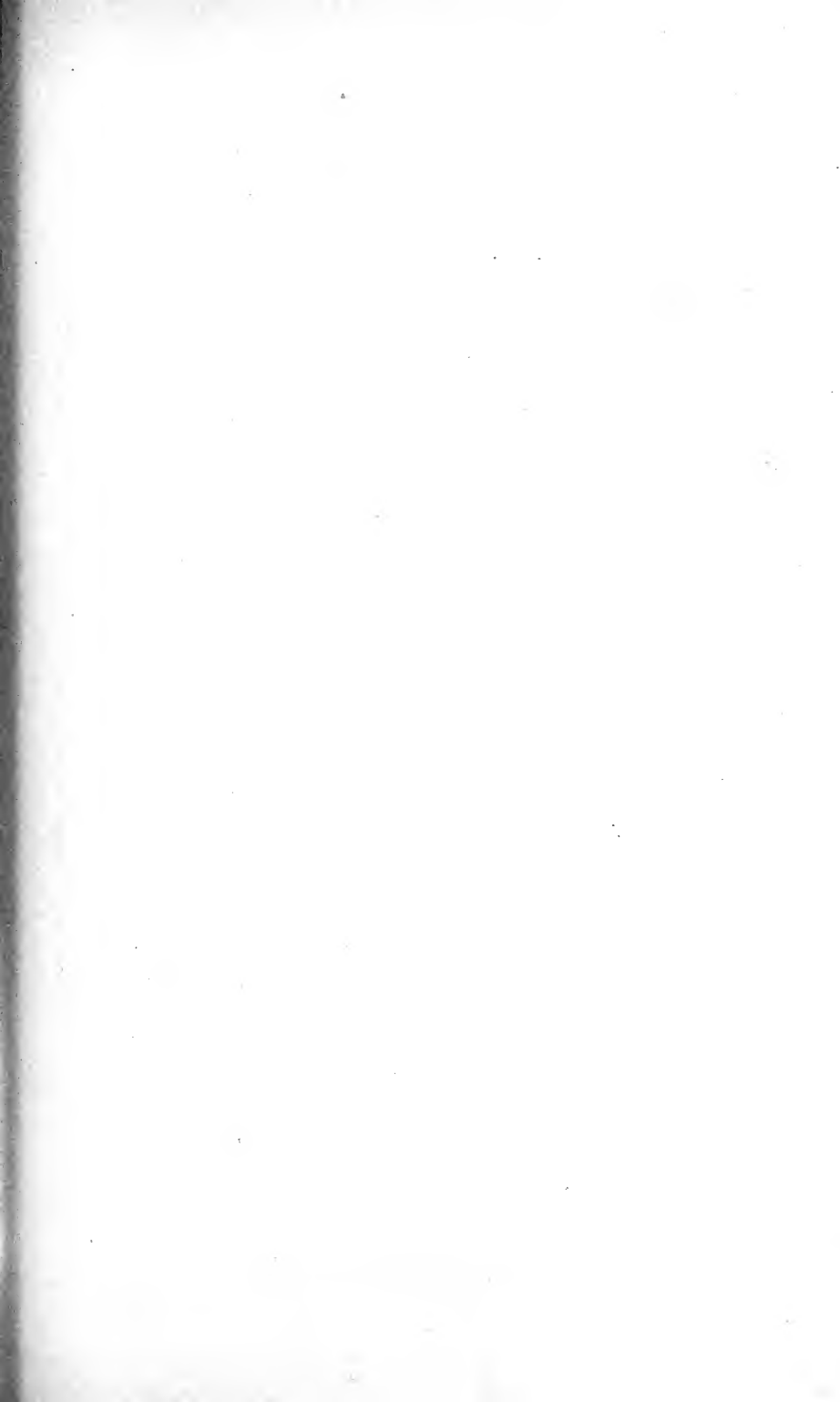
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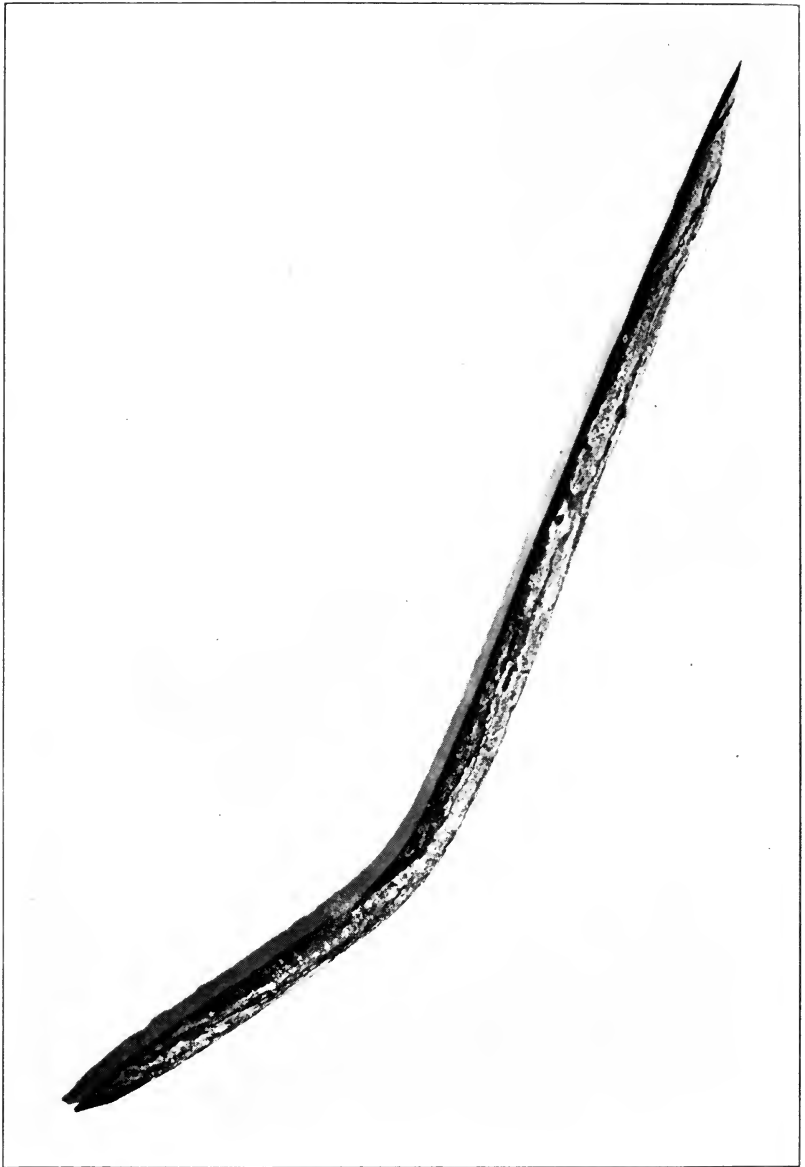
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Copper Pike from Forest County.
Milwaukee Public Museum print.

The Wisconsin Archeologist

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No. 2

THE GREATER COPPER PIKE

George A. West

The above name seems appropriate for a very rare type of prehistoric copper implement that heretofore, because of their shape but regardless of their size, have been classed as pikes. Considering the length and weight of the greater copper pike, it is reasonable to presume that it was employed for purposes where the smaller examples, being seldom more than ten or twelve inches in length, could not have sufficed. The greater copper pike is round in section, double pointed and from about fifteen to more than thirty inches long. Of the twenty thousand copper artifacts found in Wisconsin, not to exceed a dozen or fifteen are of this type.

The Milwaukee Public Museum was fortunate in recently acquiring the specimen of the greater copper pike illustrated in the frontispiece. This specimen is thirty inches in length, one inch in its greatest diameter, circular in cross-section and tapers to a sharp point at each end. It weighs three and one-half pounds. It well illustrates expert craftsmanship in its fabrication by the Indian artisan. It shows the ridges and pits of erosion sufficiently pronounced to indicate pre-Columbian age, and probably many centuries more. It bears a heavy coat of green patina, which adds to its value as a specimen. This pike has a decided curve or bend well toward one of its ends, its object being problematical. Considerable power must have been applied to produce this bend. The specimen bears no sign of abrasion or evidence of injury from having been bent as the result of a wagon, or other vehicle, passing above it, or from the tread of some animal. Such an explanation of the curved shape seems more unlikely as the pike was found in a gravel pit, two feet below the surface.

This interesting specimen was discovered in Forest County, Wisconsin, which is farther north than the range of copper artifacts in this state is supposed to extend.

OTHER GREATER COPPER PIKES

In the Hamilton Collection, at the State Historical Museum, are three fine examples of the greater pike, all found in Wisconsin. One from Shawano County measures nearly thirty-two inches in length and weighs six pounds. Another from Manitowoc County is twenty-eight and one-half inches long and weighs two and three-fourths pounds. The third is a trifle over eighteen inches in length and weighs twenty-one ounces. Each is circular in cross-section with a graceful bevel to a sharp point at either end.

In the Logan Museum, Beloit College, are two examples of the greater pike from the south central portion of Wisconsin, of precisely the same form as that described above. One is about thirty inches in length, and the other is two-thirds as long.

A very fine example, thirty-two and one-half inches long and weighing four pounds, from Carlton County, Minnesota, has found a home with the Minnesota Historical Society.¹¹

A collector, Mr. Walter Wyman of Chicago, secured a greater pike found in Wisconsin that is reported to be about thirty-six inches long. It was cut in two by the finder and soldered together. This is the largest of all pikes that have come to the writer's notice. An attempt to trace its present ownership has failed.

Foster¹² mentions a pike of this type, reported by the late Fred Perkins, of Burlington, Wisconsin, a noted collector of his time, who failed to secure it. This pike was found near Barton, Wisconsin, in 1873. In about 1884, when visiting the writer at Racine, Mr. Perkins informed him that this particular pike was found by a woman in her garden, and described it as being "as long as her arm", and that she sold the same to a junk peddler for twenty cents, it weighing four pounds at five cents a pound. Thus one of the rarest

¹¹ Babcock, Willoughby M., *Wis. Arch.*, N. S., Vol. 7, pt. 4, p. 211.

¹² Foster, J. W., *Prehistoric Races of the U. S.*, p. 250, 1873.

of all copper artifacts so far found in Wisconsin was lost to science forever.¹³

THEIR PROBABLE USES

Pikes of this type may have been found convenient for a diversity of uses. That they were employed as weapons is improbable. One important use to which they were likely put was the burning of holes. In hollowing out a solid log in making the dug-out or log canoe, the excavation could have been much facilitated by burning a series of holes across the grain of the wood in a number of places, after which it would be an easy task to split out the sections of wood. This sort of canoe, rather than the birch bark type, common to upper Wisconsin and Michigan, was used in locations where the greater pike has been found. This process of burning and chipping could also well be employed in making wooden mortars, used in the reduction of wild rice and corn to flour or meal. Troughs used in the harvest of maple sugar, basins, and many other receptacles of wood were doubtless made in the same way. Another important use of this implement would be that of pecking holes through the ice for winter fishing. It might have been useful in the clearing of land and its preparation for planting, in punching holes in hard soil for tent stakes, and for many other purposes that the lesser pikes were not large enough to accomplish.

THE WEAVING TECHNIC OF WINNEBAGO BAGS¹⁴

B. F. Carter

Very little has been written about the woven bags of the Woodland Indian tribes, and practically nothing about those of the Winnebago. Radin¹⁵ mentions them in connection with food storage and includes several plates illustrating

¹³ West, Geo. A., *Copper its Mining and Use by the Aborigines of the Lake Superior Region*, Milw. Publ. Mus. Bull., Vol. 10, no. 1. pp. 92, 93, 1929.

¹⁴ This paper was awarded first prize in a Beloit College contest and is now the property of the Logan Museum.

¹⁵ Radin, Paul, *The Winnebago Tribe*. 37th Ann. Rept., Bur. Amer. Ethn., p. 118, Washington, 1923.

them, but he makes no study of their fabrication or design. Such a study would be profitable, as these bags are a common feature of the material culture of the Central Algonquian tribes, especially the Ojibwa (Chippewa), Sac, Fox, Miami, Menomini, Potawatomi, and Kickapoo; and of some Siouan tribes whose culture is essentially Algonquian, viz., Iowa, "Santee" bands of Dakotas, and Winnebago. These wallets were used for storing food and clothing in the lodges and for carrying goods when moving from one site to another; the smaller ones often were used for carrying objects on the Indian's person, since his clothes were devoid of pockets; larger wallets, or "friendship bags", were used for carrying presents to other clans and tribes.

I examined a considerable number of these bags from various tribes, and, more specifically, fifty genuine Winnebago bags. Data for this paper were obtained chiefly from these observations. Since the manufacture of these bags was accomplished by the skillful use of the hands, without the aid of tools, the technic necessarily varied somewhat with each maker, so that no arbitrary statement of the exact methods of weaving these bags can be made. Mr. Oliver La Mere, a part-Winnebago Indian, and author of several monographs on Winnebago social and material cultures, stated in a letter to the writer that "the weavers did not use any looms, but had strings suspended on a stick, and worked with the fingers. A few of the older women can still weave the bags, but do not do it." Never having witnessed the process, then, we can only make generalizations as to how the wallets were actually fabricated. The first part of this paper will deal with the various methods of preparing material and weaving it, together with descriptions of different types of bags; the second part will treat of the designs and symbols used.

TECHNIC OF MANUFACTURE

1. *Preparation of Materials.* Before any textiles can be woven, thread has to be prepared. Originally this was done by the weaver, and only in such amounts as were immediately needed. Later, thread was made some time in advance, and there was a division of labor: one person gathered and prepared the fibers, while another did the weaving. In

the manufacture of thread there are three essential processes:¹⁶ (a) ginning, or stripping and cleaning the fibers of foreign material; (b) carding, or loosening and straightening the cleansed fibers; (c) spinning, or drawing the carded filaments into an even rove and twisting them into fine or coarse thread.

One of the most common materials thus prepared was bast, the strong, woody fiber from the phloem of various trees, especially linden, or basswood. Hoffman describes the preparation of bast by the Menomini Indians.¹⁷ Their neighbors, the Winnebagoes, employed practically this same method. The inner bark of young basswood sprouts was peeled off in sheets and was softened by boiling in a solution of lye made from wood ashes. The shoulder blade of a deer or other large animal was fastened to an upright post and a hole about one inch in diameter was drilled through the blade. The softened fiber was then pushed back and forth through the hole until all splinters and hard fragments had been removed; hanks of fiber were then hung up in the lodge, and cords were twisted from them when desired. The inner barks of cedar or slippery elm were also used.

Indian hemp (*Apocynum cannabinum*) occurs from the Atlantic to the Pacific, and was widely used by aborigines in making many kinds of cordage articles, as was wild nettle fiber also. These stalks were commonly hackled by beating with sticks, and were sometimes boiled in lye solutions. The threads made from this rotted nettle fiber, as it is often termed, have a strong resemblance to ecru cotton string. The Winnebagoes also made a woolly yarn from buffalo hair.

The Winnebago women spun these fibers into yarn in much the same fashion as primitive peoples all over the world. No spindle was used. They held the hank of carded fiber in the left hand and with the right pulled out a strand which they separated into two parts. These they rolled against the thigh with the right hand, and then allowed the fibers to twist themselves together into a cord. In this man-

¹⁶ These processes are suggested by Luther Hooper in "The Loom and Spindle", Annual Report of the Smithsonian Institution, p. 633, Washington, 1914.

¹⁷ Hoffman, W. J., The Menomini. 14th Ann. Rept., Bur. Amer. Ethn., No. 1, pp. 260-7, Washington, 1896.

ner they obtained more pressure than by rubbing the fiber between the hands and, moreover, the left hand was free to hold the hank. The twisted portion was pushed to the right beside the spinner, and more fibers were drawn from the hank, and the process repeated. In this way it was possible to spin very even cords, varying from the thickness of pack thread up to twine about three-sixteenths of an inch in diameter. After the advent of the white man in Wisconsin, the women secured Germantown yarn from traders or unraveled string from grain sacks. The stems of flags and rushes were also used in the coarse, openwork bags. They frequently were not twisted but were left as rough, semi-flat fibers.

The Indian women knew many processes of coloring these threads with primitive dyes. It is not within the scope of this paper to list the minerals, roots, and plants which yielded coloring matter, nor to tell of the surprising amount of chemistry which the aborigines applied in producing dye-stuffs. Coville has made a careful study of the plants used in dyeing basket materials, and his work¹⁸ indicates in part at least the dyestuffs used by the various tribes.

2. *Methods of Weaving.*¹⁹ Having observed how the Indians prepared the yarn, we are now ready to consider the methods of combining it into textiles. Of the various methods of weaving—checkerwork, wrappedwork, twilledwork, twinedwork, etc.—we need deal with only the last mentioned, inasmuch as that was the only kind observed in the fifty Winnebago bags that were studied. Twining is found widely in the primitive cultures of both North and South America, and indeed among savages throughout the world. It is the most intricate of all the methods of weaving or plicating fabrics. Twinedwork is built on straight warp elements, the weft elements being administered in two or more strands, although in the Winnebago bags only the two-strand twining is found. In passing between the warps, the pair of weft elements make a half twist on each other. Ac-

¹⁸ Coville, F. V., *Annual Report of the United States National Museum of the Smithsonian Institution* (Washington, 1904), pp. 199-214.

¹⁹ The terminology here used is that suggested by O. T. Mason in his work "Aboriginal American Basketry", in *Ann. Rept. U. S. Nat. Mus., Smith. Inst.* (Washington, 1904), pp. 193-7, 221-40.

cording to the relation of the weft elements to one another and to the warp, different structures in twined weaving result. Those which we shall need to consider are, (a) *plain twined*, (b) *diagonal twined*, (c) *wrapped twined*.

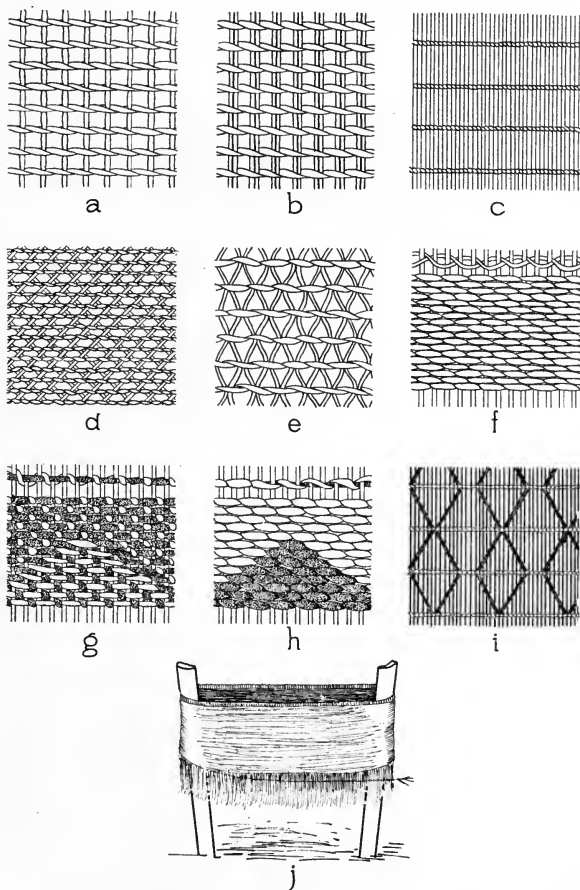


Fig. 6. Winnebago weaving technics: a, plain twined openwork, single warps; b, plain twined openwork, paired warps; c, plain twined closedwork; d, plain twined openwork, crossed warps; e, loose zigzag twinedwork; f, diagonal twinedwork; g, wrapped twinedwork, inside view; h, wrapped twinedwork, outside view; i, beading over twinedwork; j, method of suspending bag while weaving.

(a). *Plain twined weaving*. Plain twining may be done over single warps (figure 6, a) or over pairs of warp treated as one (figure 6, b). In either of these, the weft elements are carried along in rows spaced from one-quarter to three-

quarters of an inch apart. If the warps are spaced, the resulting netting is termed open work (figure 6, *a* and *b*). Closed work (figure 6, *c*) results from crowding the warp together tightly. The warp elements may also be crossed at an angle to produce a further variation. The weft passes across between the points where the warps intersect each other, leaving hexagonal interstices, forming a sort of lattice effect (figure 6, *d*). As an intermediate step between these, we also have a zigzag weave over paired warp (figure 6, *e*), which is very common among the older wallets. The weft rows are usually about one-fourth of an inch apart. Each strand of a paired warp is caught alternately with the other half of the same warp and with a strand of an adjoining one. The warp elements, being flexible under the strain of weaving, assume a zigzag shape, leaving triangular interstices.

(*b*). *Diagonal twined weaving*. The twisting of the weft elements in diagonal twined weaving is precisely the same as in plain twined weaving, the difference in texture being caused by the manner in which the weft crosses the warp. The technic of diagonal weaving consists in passing over two warp elements at each turn. Adjoining weft rows, however, do not include the same pairs in each half turn. The ridges on the outside of the textile, therefore, are not vertical as in plain weaving, but pass diagonally over the surface; hence the term, diagonal weaving (figure 6, *f*).

(*c*). *Wrapped twined weaving*. One of the weft elements in wrapped twining is laid along one side of the warp elements at right angles to them. The other weft element is wrapped about the crossings of warp and weft, parallel to the warps on the back of the textile, and to the untwisted wefts on the front of the textile (figure 6, *g*). Usually this type is combined with diagonal twining to produce a variation in design, since it allows a weft element of one color to remain hidden on the inside of the bag while one of another color (the wrapping element) predominates on the front (figure 6, *h*). Warps are usually treated in pairs, the same as in diagonal twinedwork, except when a vertical instead of diagonal line is required for the design. Then the turns of successive weft rows alternate over one and then two warps along the edges of the vertical stripes.

3. *Types of Bags.* The several kinds of twinedwork described above were often included in the same wallet for purposes of ornamentation. For convenience the bags are classified into five groups on the basis of their texture.²⁰

Type I. The bags in this group were made solely for utensils. The material is either rush fibers or coarse bark cords, fashioned in either open or closed plain twinedwork. Paired straight warps are less common than single warps. The openwork bags usually have either zigzag or crossed warp. Weft strings are sometimes nettle or softened bast threads; more commonly they are a coarser twine made from unsoftened cedar or elm bark. Sometimes vertical stripes are produced by including groups of colored warps spaced off with plain ones. Faded red, blue, and green are the commonest colors, with occasional lavender or yellow ones. The warp threads were suspended over a stick the length of the desired bag. Starting at one end of the stick, a row of plain twined weft was carried across to the other end, along what was to be the bottom of the bag, and then was continued around spirally, each time being spaced from three-eighths to three-quarters inch from the previous round. The bottom was narrowed somewhat by crowding the warp closer together than at the top. The weft spiral stopped three or four inches from the free ends of the suspended cords, and these were then braided into a finished edge. The stick, which was probably hung by cords from a tree limb or lodge rafter, was removed, and the finished bag was ready to be used as a gathering pouch, granary, or clothes bag. Because of their utilitarian purpose, a minimum of ornamentation was placed on them. In addition to the colored warps previously mentioned, there was sometimes added a beading of colored straw, brought down zigzag outside the warp, but caught in the passing weft turns so as to produce two or three chains of colored diamonds on

²⁰ This classification is mine. Other groupings have been made according to uses, age, or designs: but for the purpose of this paper, which is to deal primarily with the technic of manufacture, the classification by texture is the most satisfactory division of the fifty bags studied. The number of bags in each group is as follows: Type I, 10; Type II, 11; Type III, 1; Type IV, 26; Type V, 2. Since these bags were found in three museums and two private collections, these numbers are somewhat indicative of the relative scarcity of the different types.

either one or both sides of the bag (Figure 6, *i*). The size range of these type I bags is from nine by twelve to fourteen by twenty-four inches.

Type II. "The technic of these wallets is so interesting in the survival of ancient weaves that they justify a special description. They are from elm bark twine associated with colored yarns. The weft is plain twined weaving; all the ornamentation, therefore, is effected by means of the warp, which is partly vertical, but more of the zigzag type. In all the specimens the warp is made up of twine, partly in the material of the weft and partly in colored yarns. The diameter of the warp twine, especially the yarns, seems to be greater than the length of the twists in the weft, so that there is a crowding which brings one color to the front and leaves another color inside—that is, the figures that are brown on the outside will appear in yarn on the inside and the reverse. To be more explicit, beginning at the lower edge of any one of these wallets, the warp may be in pairs, the elements of which separate and come together alternately in the rows of weaving. On the outside of the bag two elm-bark warp strands will be included and appear; in the next half twine two yarns will be included and show on the inside of the wallet. After this zigzag process goes on for a short distance the weaver changes her plan, omits the yarn warp altogether, but continues the twining process, making a strip of plain twined weaving with vertical warp." In this quotation, Mason²¹ is describing an Ojibwa bag. Its zigzag closed work, or crossstitch twining, is identical to the texture of the Winnebago bags of type II. Nettle thread or cotton string is often substituted for the elm-bark fiber. There usually is a strip of plain twining over double warps at each end; then one or two figured stripes in colored yarn and ecru twine, set off by plain stripes; and then a large center design. The bags were suspended inverted on a stick in the same fashion as type I, and were woven from the bottom down. The beginning of the weft, however, was not at one corner, but near the center of the bottom, since the corners are too tightly woven to allow starting there. One pair of wefts continues around the bag spirally to within an inch

²¹ Op. Cit. pp. 385-6.

of the top. The other pair goes from the center of the bottom to the corner, and there becomes a pair of warp elements. No splices were detected in the long spiral weft; this means that the weaver needed two three-hundred-foot weft elements and that she had to work two balls of string about two inches in diameter through the warps at the start of the weaving. The size of these balls diminished, of course, as the work progressed. The weft may have been woven on shuttles, although I have never seen any from the Winnebagoes. She narrowed the bottom of the bag by including more than two warps in each twist of the weft for several turns near each end. To make a border at the top, half of the warp pairs were clipped off after the fourth from the last weft row; the other warp strings, which are about four inches longer, were doubled back on themselves and their free ends hidden in a welt that was bound at one edge by another row of weft twining. The weaver then added three more rounds of weft over these doubled-back warps; then she cut the weft and knotted it. A fringe of looped warps about one inch long was now left. She gathered these loops together in fives and loosely twisted them, catching them at the top in a fine six-strand braid running along the edge. These twisted loops cause the border to roll over the top of the bag, giving a very pleasing finish. The commonest size of this type of bag is about fourteen by twenty-two inches, although sizes range down to wallets only six by seven inches. The ornamentation on these bags will be described in the second part of this paper.

Type III. I have seen only one bag²² of this type, but it is so unique that it is impossible to include it in any other group. It is about fourteen inches in height by twenty-two inches in breadth. Unlike the previous types, the warp runs horizontally around the bag in a spiral from top to bottom. The weft is vertical, but each element, instead of crossing the bottom of the bag, returns on the same side. The weaving is mixed diagonal and wrapped twinedwork. Two pairs of wefts travel down the bag, including alternate pairs of warp; in the last twist of the wefts only one warp is caught, so that on the return alternate pairs are still included in

²² Milwaukee Public Museum, Cat. No. 3327.

adjacent weft rows. The first weft row returns as the third, the second as the fourth, and so on. The bottom is sewed together and the weft ends at the top are looped and made into a border the same as type II. Obviously a bag with horizontal warp cannot be woven by a method of suspended threads. The warps have to be stretched over a frame in such a way as to be moved along. Professor Linton of the University of Wisconsin suggested to me that this bag was made on a sort of roller loom. Although there is no evidence that roller looms were ever found among the Winnebagoes, it would seem that some such device would be essential for this type of weaving. Two polished sticks driven firmly in the ground would serve to hold the horizontal warp-spiral. Since the patterns on the front and back of the bag are different, and separated by unornamented diagonal-twined stripes, part of each side could be woven without moving the warps. After they were thus stabilized with weft, the bag could be rotated about the sticks by springing them together enough to remove the tension from the warp. Such a device would contain the basic principle of the roller loom and be consistent with the stage of Winnebago culture. To satisfy myself that this method would offer no practical difficulties, I set up a model loom and wove a few courses. To unskilled fingers it is a slow, awkward task, but it is perfectly possible to reproduce the bag in this way. For a tight weave like this I found a thin strip of wood very useful as a batten stick, as did the Winnebago women, no doubt. The weft material is nettle or fine bast twine and colored cord; the warps are of heavier cord. It has a rather simple geometric design of diamonds and rhomboids. Without doubt it is a rare specimen.

Type IV. This type of bag is comparatively modern, and hence is the most common. The weft is usually woolen yarn obtained from traders and is woven horizontally in mixed diagonal and wrapped twinedwork. The Indian women occasionally spun the weft twines, but more commonly obtained string of white manufacture, either from traders or from unravelled sacks and knitted wear. The patterns were in two colors in separate horizontal bands of mixed twining, set off by single-colored stripes in diagonal twining. More than two colors in a pattern are impossible

in two-strand wrapped twinedwork. This does not mean, however, that the bags were never of more than two colors. On the contrary, I have seen as many as eight different shades of yarn in one wallet. The colors of each pattern row—and there are usually several of these rows—may differ. When changing from, for example, a brown to a blue weft yarn, the two are not tied together; instead, their ends are buried in the textile. This causes the bags to unravel more easily than those of type II, whose weft is a continuous twine. In weaving these bags, the Indian women used the technic of suspended threads. The warps, although they hung double, did not cross the bottom of the bag. When the weaving was completed, therefore, the result was a bottomless cylindrical band of cloth that had to be flattened and sewed along the bottom to produce a bag. During the weaving process the bag was inverted and fabricated from the bottom down. The Menomini²³ weavers drove two sticks in the ground at a distance equal to the desired breadth of the bag (figure 6, j). Around these they tied a loop of cord and hung warps from this loop. The sticks inclined sufficiently outward at the top so that after the first few rows, the weft did not bind on them, but hung free on the warps. After the weaving was completed, the loose warp ends were gathered in groups to form a sort of hemstitched border about an inch deep, and then gathered into a rope encircling the top of the bag. This rope was bound with yarn which made a half hitch or buttonhole stitch at each wrapping. On some of the bags the warps are cut off flush with the last weft row, and the raw edge bound with cloth. The bags in type IV are generally large, about eighteen by twenty-two inches being the average size. I have never seen handles on any Winnebago bags.

Type V. There are only two bags in this group. Both resemble type IV in that they have vertical warp and horizontal weft, together with sewed bottoms and cloth-bound tops. One²⁴ has a turned-in seam up the side as though it

²³ Skinner, Alanson: "Material Culture of the Menomini", *Bulletin of the Museum of the American Indian: Indian Notes and Monographs Number 20* (New York). Since the cultures of the Menomini and Winnebago tribes are so closely related, this description of technic would apply to either.

²⁴ Wisconsin State Historical Society Museum, Number 2014.

had been made in a flat piece instead of circular. It may have been cut down from a wider bag, as it was about ten by fourteen inches in size. It has a wool weft and is very similar to bags in type IV except for the technic of the diamond design on it. The other bag²⁵ has a fine, hard, horizontal weft, closely woven in these same diamond and elongate-hexagon designs. The material is probably bast fiber of good quality and well twisted. Diamond designs on bags of type IV are produced by hiding one warp in wrapped twining. The diamond design here, however, is made by diagonal twining in a peculiar fashion. Instead of following clear across the bag, the weft rows double back and forth to produce a triangle; then they follow down one side of the triangle to a base vertex of an adjacent triangle and from there repeat. The course taken by the weft is indicated in figure 7. This weaving was done from the bottom down, since the bag was suspended inverted. In figure 7, then, the red weft was all put in before the black was

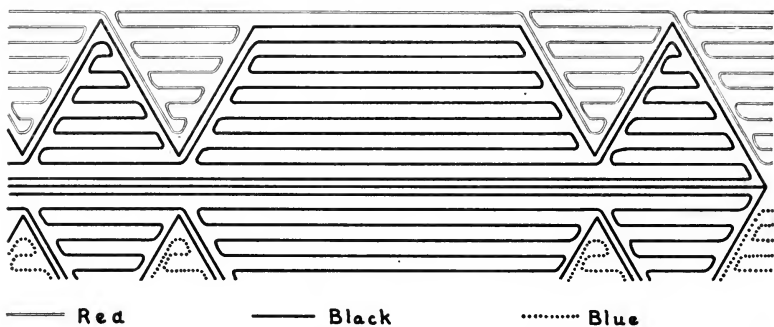


Fig. 7. Path of weft in type-V bags.

started, and the black was finished before the blue was started. The bag at the Milwaukee Public Museum has red, green, yellow, tan and brown patterns on it. The design on the bag from the State Historical Museum is not composed entirely of these diamond patterns, but has four rows of them inserted between other patterns in mixed twining. It is, therefore, a sort of transition between types IV and V.

²⁵ Milwaukee Public Museum, Number 3330. In the opinion of W. C. McKern, this bag is more typically Winnebago than any of the other types, which show strong Algonquian influence.

DESIGNS AND SYMBOLS

There is a marked difference between a design and a symbol. The former may have no particular significance other than to please the eye or identify the ornamented object; the latter always has a mystical meaning, known usually only by the maker of the symbol. Radin, in his abrupt and arbitrary manner, says, "These bags were always covered with designs, mostly of geometric patterns, although realistic designs, as elk, deer, thunderbirds, and water spirits, all unquestionably property marks, were frequently used."²⁶ Without doubt these designs did serve as property marks, but they were more than designs; they were secret representations of moods and feelings in the weaver's life. It is true that the Central Woodland tribes did not weave nearly so much mysticism into their bags and baskets as did many Western tribes; the Winnebagoes did, nevertheless, have much symbolism in their bag designs. Lakes, hills, mythical and tribal animals, as well as abstract ideas, were represented in the patterns, although oftentimes in such degenerate geometric forms as to be unrecognizable. Zigzag lines are interpreted as waves or lightning; triangles are supposed to represent mountain tops, arrowheads, or tepees. However, except for certain unmistakable animals, there is no way of understanding a symbol unless it be interpreted by its creator. According to Mr. La Mere, "Many of the bags have designs of the weaver's inspirations during fasting in their first menses periods." Among the Winnebagoes much of their social culture was built around the menstrual function in women. It is reasonable to believe, that it also greatly influenced the weaver's choice of designs.

A few of the geometric patterns on bags of type II are shown in figure 8, *a-f*. No attempt is made to interpret them. Figure 8, *g* shows a Thunderbird design that is common on the cross-stitch bags. This particular bag illustrates the legend of the Thunderbird instructing her young. She is supposed to say to the two little ones as they are flying over a Winnebago village, "Do not drop any eggs (thunder-

²⁶ Radin, Paul, *Thirty-seventh Ann. Rept. Bur. Am. Eth.*, (Washington, 1932) p. 118.

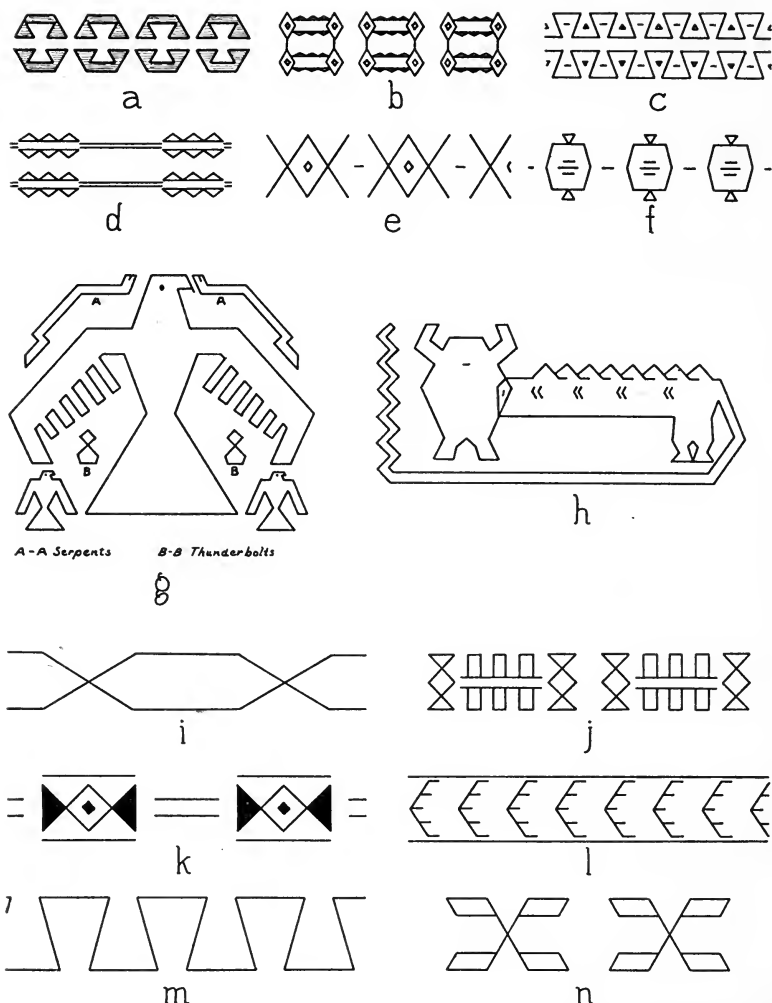


Fig. 8. Patterns and designs: *a-f*, geometric patterns on type-II bags; *g*, thunderbird design; *h*, waterspirit design; *i-n*, geometric patterns on type-IV bags, including elongate hexagon, hourglass, eye, modified herring-bone and modified swastika designs.

bolts) on the village, because the Indians are our friends.”²⁷ Waterspirits (*wak 'tcexi*—sometimes called horned panthers or underground panthers) are also a favorite design (figure 8, *h*). “Waterspirits live in the deep water off the shore of Governor’s Island. Only a few old men have ever

²⁷ This explanation was given by Charles E. Brown, State Historical Museum, Madison, Wisconsin.

seen them. These long-tailed monsters, when they are angry, cause the waters to become very rough and at such times they overturn the Indian canoes and people are drowned. At night they crawl out on the bank. When Earthmaker created the earth he put waterspirits under it to keep it from turning. Then he scattered stones over its surface and the earth became quiet."²⁸

The designs on the bags in type IV are all geometric. Many probably had symbolic meanings for their weavers. Figure 8, *i-n* gives some idea of the variety of patterns.

ACKNOWLEDGMENTS

In all, fifty Winnebago bags were examined and much of my information is the result of this study. I wish to express my appreciation to Messrs. McKern and Fisher of the Milwaukee Public Museum, and to Mr. Charles E. Brown, State Historical Museum, Madison, for their cooperation in allowing me to examine the wallets and for many helpful suggestions.

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²⁸ Brown, Chas. E., *Lake Mendota Indian Legends* (Madison, 1927), p. 4.

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EIGHTY YEARS AFTER LAPHAM

W. B. White

Anyone who has read the careful surveys of Dr. Increase A. Lapham in "Antiquities of Wisconsin", published April, 1855, by the Smithsonian Institution, must do homage to the care and attention to detail as well as the scientific conscientiousness with which he carried on the work of charting Indian mounds and earthworks in Wisconsin. The value of this document is beyond price to the modern archeologist. In attempting to trace and reconstruct the culture of the pre-historic peoples of this state, Dr. Lapham's charts are a mine of information, much of which, today, could be secured from no other source. Yet, so accurate are his maps and descriptions that, in spite of the destruction wrought by our modern civilization, all that remains of his discoveries can be identified and his information checked, although more than eighty landmark-revolutionizing years have passed since he made his survey.

It is the purpose of this research to carry on where he left off, at least as concerns the Milwaukee River and the Indian culture which abounded along its banks. Although this work has been barely begun, yet the findings already justify the labor, and they point to the need for further research on a scale which cannot be attempted at present.

The northernmost group of mounds marked by Dr. Lapham in Milwaukee County lay on the west bank of the Milwaukee River in the northeast quarter of section thirty. They were cut nearly in half by the Bender road; while the mound sites at the north end of the group were crossed by the embankment of the Chicago and Northwestern railroad. The Green Bay road (Highway 57) missed their western border by a narrow margin. But, destructive as these arteries of modern civilization might have been to the earlier Indian culture, the Bender road has acted as a preservative agent. The entire site of this group of mounds is now gravel pit and dump heaps, and all that remains of the extensive earthworks (except for a portion of one intaglio which fortunately was placed above a poor grade of gravel; hence not removed) are those two or three mounds which were buried in the embankment of the Bender road.

So accurate were the charts of Dr. Lapham that even this minute remainder could be traced and identified in the midst of the present debris and desolation (figure 9).

Originally, according to Dr. Lapham, this site contained not less than twenty-one conical mounds, two linear, two effigy (probably bird), one lunar, and five intaglios, making a total of thirty-one. Three hut rings and an Indian garden are also indicated by him.

These mounds occupied a former elevation above the Milwaukee River extending about half a mile from north to south. Beginning on the south at a small, southeasterly-directed ravine which cuts the twelve foot bank marking the highwater mark approximately a quarter of a mile south of the Bender road, they follow the direction of this bank and the river to terminate at another small ravine near the section line. This north boundary is at the site of the old Bender mill (present Town and Country Club).

In this immediate vicinity were formerly placed four conical mounds and one intaglio. They were noted by Lap-

ham chiefly because one of them had been used for a recent burial shortly before the time of his survey (1848). He describes how the top of the older mound had been scraped out into a shallow burial, while poles had been piled above

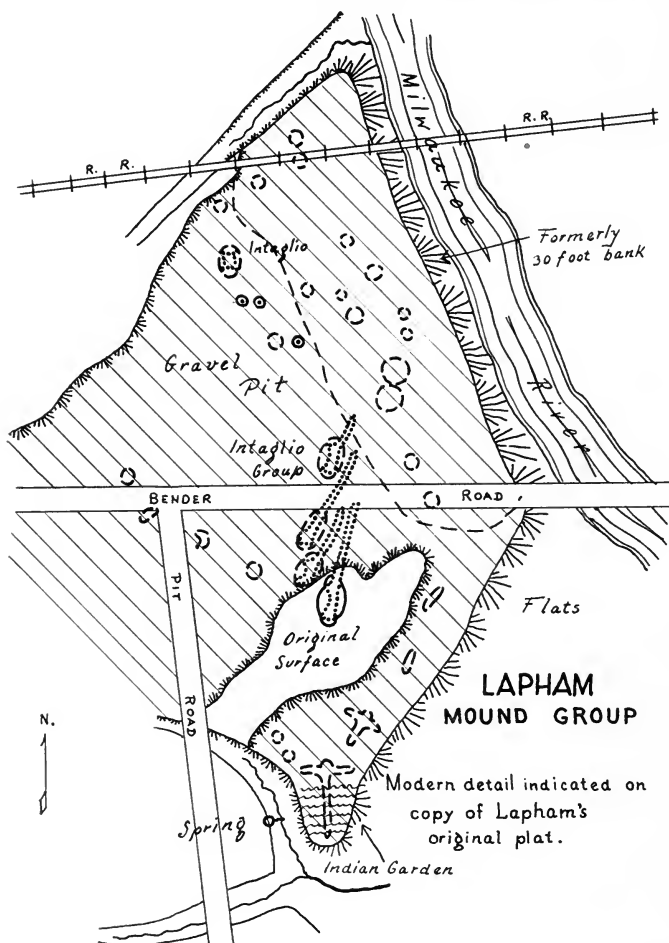


Fig. 9. Lapham's map of Milwaukee River mounds, showing surviving features.

the bodies to keep off wolves and other wild animals. Thus, bodies from two widely differing periods probably lay in the same mound. Unfortunately, all this was destroyed by various excavations extending over a period of many years, and no one seems to remember what was found here. These

mounds, as has been said before, were also in the path of the railroad embankment.

South of these lay a group of eight conical mounds dominated by two larger conicals, designated by Dr. Lapham as "observation" mounds. These last two are well remembered by Mr. Wilbur Bender on whose farm they were situated. At the time the gravel was dug he removed part of them to fill a spring hole at the south of his farm and obtained "at least 100 wagonloads of dirt from them." He is not certain that implements were found in them, although two or three bodies were buried there. Skeletons, potsherds, flint and copper implements, and ornaments were found in the smaller mounds adjacent.

The only remaining traces of these last are those which happened to be preserved by Mr. Bender, Mr. Meseberg, Mr. Kleist and others in the neighborhood, whose kindness and cooperation in the present work deserve acknowledgment, as does that of Mr. Louis Pierron whose knowledge of the territory has been of great service.

Noteworthy among the findings on this site are those few scraps of pottery which have been preserved. They indicate cultures of two distinct types: (1) an Algonquian-like culture, as indicated by the grit-tempered, cord-imprinted Lake Michigan ware; and (2) a Siouan culture, probably Winnebago, with its flaky, shell- or cell-tempered Upper Mississippi ware.

It is again unfortunate that circumstances do not permit absolute identification of the potsherds with their respective burials, but such is impossible. However, this much is indicated: the mounds of the Lapham group were probably not the work of a single tribe or culture. It is more likely that they grew exactly as a modern city grows. Tribe A came to the site of the Bender road an unknown number of years ago. A camp was decided upon and mounds of a certain cultural pattern were built upon desirable sites. Years pass. Tribe A decides, or is forced, to move, and tribe B, finding the site desirable, moves in, being either ignorant of, or ignoring the former culture. They build their mounds, or if not mound-builders, leave their burials, and imprint their distinct cultural impress upon the location. Then they pass, and tribe C, which may be of the same stock or even a new

generation of tribe A, become the tenants. But they, too, are probably ignorant of or ignore the preceding cultures, building according to their own pattern which may be some modification of the old. Thus, a third and distinct impress may be left upon the growing group of earthworks, which to an observer, coming years later when even the more recent Indian culture has become legendary, may appear, at first glance, to be the work of a single community.

It is with the problem of these overlapping cultures that the modern archeologist must deal. Thus, it is unfortunate that evidence like that which this site might have yielded has been obliterated. The loss is comparable, in a sense, to the erasure of precious old Greek manuscripts upon which monks of the Middle Ages wrote their endless repetitions of the New Testament. Modern culture has destroyed the records of these ancient Indian cultures in order to inscribe its endless repetition of cement roads and skyscrapers.

Among the ornaments found on this site were conical bangles constructed of strips of brass, or some alloy of copper, and formed to fit, one inside the other, on a string. These probably represent the era of white influence on the continent, but they do not necessarily indicate the presence of whites in the vicinity. Trade between the Wisconsin Indians and the seaboard existed before the white man came to this state and was quickened by his presence. A steel knife was also found, according to Mr. Bender, but although it was picked up in a burial, the use of a scraper in removing the top soil would make it problematical whether this last was actually buried, or whether it was "float" and scraped in. A copper needle and a copper awl, the latter having a thumb and finger grip flattened into its handle, were also found by Mr. Bender.

As to the actual numbers buried in the site, no exact record exists. Mr. Bender states that more than one body was found in most burials, while Mr. Meseberg recalls that the usual position was "on their bellies with their knees drawn up under their chins." Some testimony is offered to the effect that a few bodies were buried "lying out straight". Neither men recall that the heads pointed in any particular direction, but they feel that accident, rather than design, determined this phase of burial.

To the southwest of the mounds just described lay a group of four intaglios. The Bender road passes through the site of this group, probably covering with its north embankment the body of the northernmost intaglio. The intaglio remaining was one of the southernmost of this group.

To the southeast of the intaglios and near the southeastern boundary of the plot lay two linear mounds. Nothing has been learned concerning them to date.

Southwest of them lay two effigy mounds, a large and a small. The smaller lay between the linear mounds and the large effigy. This last is thought by Mr. W. C. McKern of the Milwaukee Public Museum to have been a representation of a flying wild goose, or similar water fowl. On either side of it and encroaching upon its crest, Dr. Lapham has indicated an Indian garden. He notes that its boundaries do not respect the supposedly sacred character of the symbol upon which it was placed, and he comments upon the fact by concluding that the gardenmakers did not know or care. He says:

"Indeed it is hardly to be supposed that any extensive system of works was ever planned out by the aborigines and built up at one time. Those we find were doubtless the results of successive efforts, perhaps by separate and distinct generations, and even, in some instances, by distinct tribes."

He feels that the Indians who built the mounds were not the ones who made the garden. They probably belonged to another generation, and perhaps to a different tribe.

Scattered among the mounds just described are other smaller mounds. Nothing is known about them save in the instance of the lunar mound and its neighbor to the northwest. The lunar mound had a scrub oak growing upon it and is remembered by many people in the neighborhood; and its neighbor lies at the intersection of the Bender road with a side road leading into the gravel pit. Both mound sites served as landmarks in locating the rest and led to the discovery of the remaining intaglio.

North of the ravine marking the north boundary of the Lapham group just described, lies Blatz Park. It has a portion of an effigy mound, probably turtle, and an Indian garden. Further work may reveal a campsite.

North of it lie the gravel pits on the farm of Mr. Mese-

berg. Many burial mounds, a campsite, and an arrowhead factory have been found here. However, the data on this site has been too recently collected to warrant publication. Continuing north are many burials, probably extending all the way to Cedarburg and beyond. Indications point to many Indian camps in this territory, but they have not yet been touched in this research.

Following in the footsteps of Dr. Lapham is slow, hard work, but the results will prove worthwhile. For, if many more destructive years pass, what will be left of the little that remains, and who will be able to follow the footsteps of Lapham?

MUSEUM ORIGINS IN MILWAUKEE

John Goadby Gregory

Ninety-three years ago what is now the city of Milwaukee was a congeries of settlements beginning at the natural mouth of the Milwaukee River and ending in heavily-forested hills from two to three miles farther north. Except for a low, sandy ridge along the river, the area on the West Side between what are now West Wisconsin and West Juneau avenues was a tamarack swamp, the most noticeable development on that side being at the east end of Chestnut Street (now West Juneau Avenue). In the midst of the swamp, on an island which a generation later became the site of the Second Ward Savings Bank, stood Leland's Pavilion, popularly known as "the Shanty Tavern." The county court house, the post office, the government land office, all the hotels but Leland's, and a majority of the larger business establishments, as well as a preponderance of the residence structures, were on the east side of the river, concentrating in the vicinity of Juneau's old trading post at the intersection of East Water and Wisconsin streets, and straggling toward the court house and the lake. Milwaukee on the east side of the river and Milwaukee on the west side of the river were distinct townsite projects, each with a government of its own, though by legislative enactment they were merged in the spring of 1839. South of the river, title to the land was in dispute, and settlers

were managing as best they could without formal and legal organization. All Milwaukee contained fewer than fifteen hundred inhabitants, but was gaining accessions daily and recovering from the panic of 1837. Even at that time it was the principal population center in Wisconsin. Two weekly newspapers maintained a struggling existence—the *Advertiser*, which in 1841 became the *Courier*, and the *Sentinel*. The *Sentinel* of January 1, 1839 published the following announcement:

“Lyceum.—The citizens of Milwaukee desirous of organizing a Lyceum are requested to meet at the office of J. E. Arnold, Esq., on Saturday next at 2 o'clock p. m.”

In the *Sentinel* of January 8, 1839, the proposed Lyceum was accorded more space than editors of the period usually devoted to topics of a local nature unconnected with real estate promotion or elections. Here is the article in full:

“The Lyceum.—The organization of a Lyceum at this place is at once an interesting and an important event. It is a strong illustration of the march of mind and civilization, and an evidence that this community has done with the insane rage of making fortunes in a day, and puts a proper estimate upon the cultivation of mind and those refinements which necessarily attend it. Societies of this nature have been formed in almost every village in the Eastern States, and have proved to be eminently useful. Public lectures and debates, which constitute their chief objects, are well calculated to excite general interest and highly beneficial to those who are engaged in them. An opportunity is presented to all who take an interest in the scientific and literary wonders of the age to display their knowledge and researches for the benefit of others. Interesting topics of public policy can be there discussed without that acrimony of feeling which always mingles itself in the deliberations of political bodies.

“To these associations are often attached cabinets of curiosities, and libraries, which add much to their interest and usefulness.

“We believe that the one in contemplation here will be sustained—that every citizen will feel anxious for its continuance and prosperity—that as a place we shall feel a becoming pride in its organization, as it is the first, probably, which has been commenced in the Territory, and that the older portions of the country may know that even here upon the frontiers of civilization, where but yesterday the savage and the wild beast were the undisputed occupants, now flourish all the institutions of civilization and refinement. We deem the objects of this institution highly praiseworthy and entitled to the support of all who feel an interest in the welfare of our flourishing town.”

The Milwaukee Lyceum was formally organized on the 10th of January, 1839, with the following officers: President, Lucius I. Barber; vice president, Hans Crocker; secretary, Increase A. Lapham; executive committee, William A. Prentiss, H. N. Wells, Joshua Hathaway, J. S. Rockwell, Jonathan E. Arnold, John H. Tweedy. A bill for its incorporation was passed at the ensuing session of the Territorial Assembly.

January 15th, in space allotted to advertising, the *Sentinel* published the following:

"Lyceum Meeting.—The first regular meeting of the Milwaukee Lyceum will be held at the Methodist Chapel on Thursday evening next at half-past 6 o'clock. Question for discussion, 'Are usury laws expedient?' Disputants, Messrs. Wells and Arnold. The citizens generally and ladies especially are respectfully invited to attend."

That the Lyceum began its career with a flourish was attested by this glowing comment in the news columns of the *Sentinel* of January 22:

"At the second regular meeting of the Lyceum there was a numerous attendance, composed of both ladies and gentlemen. J. E. Arnold and H. N. Wells were the speakers. We hope the Lyceum, which has been thus auspiciously commenced, will continue to increase in influence and usefulness, and that hereafter, when its advantages shall have become more extensively diffused, when every village within our borders shall have imitated its example, and when library associations, academies, colleges and universities shall have their halls filled with the youth of Wisconsin, it may be said with laudable pride that the first to establish a literary institution in this territory of the Far West were the young men of Milwaukee."

In the fragmentary data available for the compilation of this review the next item bears date of October 29, 1839, being notice in the *Sentinel*, over the signatures of H. C. Crocker, president, pro tem, and I. A. Lapham, secretary, that "by order of the Board of Directors, the regular meetings of the Milwaukee Lyceum will commence on Thursday, the 31st inst., at half-past 6 p. m., at the Methodist Chapel." The following is from the *Sentinel* of November 5th: "It is with pleasure that we notice the revival of the Lyceum meetings. Meetings will hereafter continue on Thursday evenings." In sharp contrast with the tone of its earlier refer-

ences, is the following from the *Sentinel* of December 24, 1839:

“OBITUARY

“Died.—About three weeks since, the Milwaukee Lyceum, owing to a general debility of the system. We think, however, with the timely aid of a galvanized battery life might be restored. Will not some of the old friends of the deceased make an effort at restoration? If successful, we propose the following question for discussion. ‘Is the permanency of the Union of the States probable?’ or this, which we think more appropriate: ‘Is there perseverance enough in the young men of Milwaukee to sustain the Lyceum?’ Let there be no scrambling for the negative of the question.”

One factor contributing to the momentary languishing of the organization may have been that those who called it into existence and bore the laboring oar at the outset had taken on other activities which claimed their time. Dr. Barber had been elected to membership in the Territorial House of Representatives. Mr. Lapham was busy in various matters of public and private concern. New hands now grasped the helm. The following appeared in the *Sentinel* of December 31:

“Milwaukee Lyceum.—The next meeting of the Milwaukee Lyceum will be held at the Methodist Chapel on Thursday evening next at half-past 6 o’clock. An address will be delivered by the Rev. L. B. Hull. A general attendance is requested. H. Crocker, president; C. Walworth, secretary.”

The *Sentinel* of January 7th, 1840, remarked:

“We are happy to state that the Milwaukee Lyceum is revived, and we trust that the members will feel bound hereafter to sustain it with spirit. The annual meeting for the election of officers will be held on Thursday next at 3 p. m., at the reading room over the store of L. Rockwell & Co.”

L. Rockwell & Co. dealt in dry goods, groceries, hardware and crockery, their store on East Water Street being one of the leading commercial establishments at the time. It is interesting to observe that Milwaukee was provided with a reading room at that early stage of its career, and reasonable to infer that this may have been auxiliary to the Lyceum.

At the Lyceum’s annual election Mr. Crocker was chosen president and Mr. Walworth secretary. Shortly afterward

Mr. Lapham delivered a lecture. Among the subjects debated during 1840 were the Wisconsin-Illinois boundary question and the temperance movement. Hans Crocker was elected president and Charles J. Lynde secretary in 1841. In August of that year Secretary Lynde lost his life by the burning of a steamboat on Lake Erie. The *Courier* of February 9, 1842, contained the following, credited to the *Sentinel*, in which it had appeared a few days before:

"Milwaukee Lyceum.—We are happy to perceive that this valuable institution is again making an effort to render itself all that its most ardent advocates could desire. The executive committee has arranged for a regular course of lectures once a week. In addition to this, and in our opinion what will interest the greatest number, there is to be a Museum for the collection and arrangement of specimens of the different departments of natural history. We are informed that already some of our citizens have consented to deposit their private cabinets of minerals, shells, coins, birds, insects, reptiles, fish, curiosities, etc., which will at once comprise a most beautiful and useful ornament to our place. To apprise our readers of what is to be expected, we take the liberty of extracting from the catalogue of specimens:

"Minerals.—This collection will consist of a cabinet of about three thousand specimens, among which may be found beautiful objects from Mount Vesuvius, the Alps and other localities on the continent of Europe, as well as fine specimens from the mines of England and our Eastern States.

"Shells.—A collection of about two thousand shells, arranged in order, from every part of the world, including many exceedingly rare and curious.

"Coins.—The nucleus of this department was purchased at auction and once formed part of the cabinet of the Duke of York. The oldest piece in the collection was struck in the reign of Caius Julius Caesar, during the century preceding the birth of Christ. There are four hundred ancient coins in the collection, coming down to Constantine the Great, A. D. 642.

"Insects are represented by eight hundred varieties of butterflies and moths, with beetles, etc., in great numbers. Of reptiles and fish there are specimens from the East and West Indies, as well as many from nearer home. The various birds of Wisconsin will be arranged in separate cases, some thirty being represented at present by mounted specimens. The Lyceum will correspond with literary and scientific societies throughout the country, with a view to arranging for the exchange of Wisconsin minerals, etc., for such other objects of interest as may be obtained elsewhere. In a few years our town may be able to boast of a cabinet not to be surpassed in the West."

What became of the Museum for which these elaborate preliminaries had been engaged in I have so far accumulated no data to explain. Enough has been adduced to indicate that museum-minded people were not wanting in the early days. At times they worked collectively. At times they carried on important activities in private. Thomas A. Greene, who came to the city in 1848, was a business man during business hours, but studious by nature and an indefatigable collector. The Greene Memorial Museum, at Milwaukee Downer College, contains the fruit of many years of assiduous collecting by Mr. Greene. Among its treasures are 14,000 mineral specimens and 75,000 fossils, mostly gathered in Wisconsin.

In 1851 a Museum of considerable extent and importance for those days was brought to Milwaukee by Professor Amasa Buck, who opened an academy in the old Congregational Church building which stood on the present site of the Central Fire Station. He had been at the head of an educational establishment at the East in which Harrison C. Hobart had been one of his pupils. His portrait and that of General Hobart hang in the public library today. After the death of Professor Buck, which occurred in 1853, his collections were purchased by the trustees of Lawrence College, at Appleton.

Mr. Lapham's collections were of wide variety and importance. Many of them suffered destruction by fire at the burning of Science Hall in Madison on the 1st of December, 1884.

An invaluable accession to the cultural life of Milwaukee and of all Wisconsin was the inpouring of men of high intelligence and advanced education which followed the collapse of the German revolutionary uprising of 1848. One of the results of that immigration in this city was the establishment in 1851 of the German-English Academy, under the direction of Peter Engelmann. He was an ideal teacher, who imparted to his pupils not only learning but also an enthusiasm for learning which influenced their later lives and contributed to the uplift and advancement of the community at large. One of Professor Engelmann's practices was to take his pupils into the surrounding country for the study of nature at first-hand. On such excursions

they acquired familiarity with the geography of the region and peeped into its geology, its botany, its mineralogy and its archaeology. Each pupil was encouraged to gather specimens of whatever challenged his interest, and to put questions concerning their significance to his teachers. Such of the specimens as were likely to possess recurrent value in the recitation room were preserved. Before long the German-English Academy possessed the nucleus of a Museum, and this Museum grew, receiving contributions from the parents of the pupils as well as perpetual additions brought in by the pupils themselves. Professor Engelmann attended to the scientific arrangement of the miscellaneous objects in the collection, which became a frequent place of resort for older people of studious inclinations, and attained such magnitude and importance that an organization of its adult patrons, suggested by Professor Engelmann, met hearty approval.

The Wisconsin Natural History Society was brought into existence on the 6th of May, 1857, at a meeting of twenty-two well-remembered friends of learning and supporters of the German-English Academy, who signed their names to the constitution in the following order: Peter Engelmann, F. A. Pfaff, A. Bolkenius, A. Rosenthal, Christian Preusser, J. J. Dederich, A. Just, Dr. W. Lorenz, E. Vintschger, P. Bodenbach, Dr. F. Brendecke, F. Cassian, Christian Fernikes, Votja Naprstek, J. Schauss, Dr. F. A. Luening, G. A. Schmidt, E. Neymann, F. Beyer, Gustav Preusser, E. Diedrichs. Dr. Luening was elected to the presidency of the society and continued in the office till his death in 1861, after which Christian Preusser was chosen as his successor and re-elected for many years. Gustav Preusser was treasurer for a quarter of a century. There were 81 members in 1865, 229 in 1877 and 169 in 1882. Meetings were held at least once a month.

When the school had prospered sufficiently to erect its first building, on the west side of Broadway, then Main Street, near Knapp Street, a room was set apart for the use of the Natural History Society. The expansion of the Museum collections proceeded apace. When the building was enlarged, the floor-space assigned to the Museum was correspondingly increased.

Professor Engelmann died in 1874. One of his last labors of love was the preparation of a catalogue of the 731 specimens of vertebrates which the Museum contained at that time. He had planned catalogues of each of the other principal departments, but did not survive to complete them. By this time the Museum had won recognition as of value to the community, and was growing day by day. The number of objects in its cases and on its walls increased from 7,000 in 1869 to 15,000 in 1875. Some of them were suffering for want of care. Many could not be properly utilized, due to lack of accommodations for their display. Their voluntary custodian after the death of Professor Engelmann was Dr. Brendecke. He needed assistance. Moreover the establishment was short of funds, its only financial help coming from the Natural History Society, and consisting of the dues paid by members. The plan of transferring the collections of the Museum to the city was broached as early as 1876, but in this direction nothing was decided till 1881. In the latter year August Stirn, who was an alderman as well as a member of the Natural History Society, made a canvass of the members to secure their assent to the gift of the Museum to the city under conditions which would perpetuate the scientific and educational intentions of the founders. Formal offer of the Museum to the city was made in February, 1882.

At that time the Milwaukee Exposition had been established, its annual exhibitions of objects of art and industry attracting thousands of visitors to Milwaukee. One of the features of the Exposition which proved a magnet in drawing attendance was its art gallery. That the maintenance of a Museum in the Exposition building would afford an additional incentive to people in the State at large contemplating trips to Milwaukee seemed obvious to practical-minded aldermen, and also appealed to the judgment of Milwaukee members of the Legislature. Determined that at the outset of its new and enlarged usefulness the Museum should receive a testimonial of popular appreciation, public-spirited citizens raised a fund of twelve thousand dollars for the purchase of a noted collection of natural history objects from Professor Ward of Rochester, New York. The city rented space in the Exposition building for the use of what now came to be called the Milwaukee Public Museum, the respon-

sibilities of Custodian being entrusted to Carl Doerflinger, who in his youth had been one of the pupils in Professor Engelmann's school. At the end of his first year in office Custodian Doerflinger reported the treasures in his charge as including a total of 26,800 objects—11,199 zoological specimens, 2,921 ethnological specimens, 5,000 botanical specimens, 2,439 paleontological specimens, 4,532 mineralogical and lithological specimens, and 737 books, charts and pictures. Generous gifts to the Milwaukee Public Museum continued to be made from time to time. In 1886 citizens subscribed \$2,000 for the Perkins collection of Indian coppers. The Goss collection of eggs of American birds, whose value was estimated at \$10,000, was another important early gift.

Carl Doerflinger had been called in from his farm in Racine County to take charge of the institution as its first custodian, which office he held till failing health compelled his resignation in 1886-7. After a year or more on his farm he went abroad in 1889, pursuing scientific investigations in Switzerland and France. On this excursion he collected more than 1,000 prehistoric relics which are now in the Milwaukee Public Museum. The lacustrine villages of prehistoric Switzerland and the vestiges of the cave-dwellers were among his favorite objects of investigation. In 1894 he traveled extensively in Mexico, his physical condition having improved sufficiently to enable him to undergo the exertion and fatigue of journeying in the mountains on muleback. He died in 1911. His successor as custodian was Dr. William Wheeler, another former member of the German-English Academy faculty, who afterward became identified with the University of Chicago. He was ably assisted by Carl Thal. Professor Thure Kumlein, formerly of Albion College, carried on faithfully in the interest of the Public Museum for many years. Many of us have pleasant memories of Henry Nehrling as Custodian, and also of Mr. Ward.

One of the outstanding names associated with the Museum's history is that of Carl Akeley, who came in 1887 remaining till 1895, and during those eight years enriched the Museum with examples of a new art—sculptural taxidermy—which commanded admiring attention from artists as well as from students of natural history, and which contributed to the raising of technical standards in museum circles

throughout the world. A typical reminder of Mr. Akeley's genius, familiar to every visitor to the Milwaukee Public Museum, is the muskrat group, illustrating those interesting animals as living muskrats would appear to a spectator surveying them in the privacy of their home in a Wisconsin marsh. Each member of the little family is modeled with strict regard to every detail of muskrat anatomy and posed in a characteristic attitude while engaged in activity natural to his species, the exhibit as a whole possessing the merits of genre painting by a Flemish master.

As it stands, the Museum is the work of many hands. Year by year the scope of its exhibits has been extended to include material illustrative not only of natural history but also of successive phases in the evolution of the world and its inhabitants, practically embracing every subject interesting from the standpoint of human intelligence, and supplying visual aids to teaching which could not be provided by other means.

"Within its walls," to borrow the language of Dr. S. A. Barrett, its Director, "are gathered hundreds of thousands of objects from the uttermost ends of the earth. The student, whether of high or low degree, can find the actual object of his studies, and is no longer called upon to imagine that of which he reads or hears." Here is material for the geologist, the biologist, the archaeologist, the entomologist, the ornithologist, the zoologist, the anatomist, the ethnologist and the chemist, and for a variety of special researchers in other lines. Here are entertainment, illumination and inspiration for visitors representing every element in the community. The Milwaukee Public Museum has grown to be the largest strictly municipal institution of its character in the United States.

ARCHEOLOGICAL NOTES

Meetings

The Wisconsin Archeological Society held a meeting at the Milwaukee Public Museum on Monday evening, November 21. President McKern occupied the chair. Forty members and guests were in attendance. Secretary Brown presented a report on the meeting of the Executive Board. He announced that H. L. Skavlem, Dr. W. G. McLachlan, Mrs. E. C. Wiswall, Aden T. Newman and Frank G. Miller, all old members of the Society, had been elected life members. Mr. Pierron presented a report on membership. Mr. McKern gave a very interesting and informative illustrated lecture on "The Prehistoric Indian Cultures of Wisconsin" in which he presented an account of what had been accomplished in determining their character and extent. Dr. Alfred L. Kastner followed with a very interesting talk on the physical characteristics, diseases and medicines of the North American Indians giving the result of Dr. Ales Hrdlicka's investigations in this field. Various members participated in the discussions which followed this lecture and talk. N. E. Carter exhibited a fine collection of Indian pipes, tubes, discoidals, bar ceremonials and a bannerstone.

A meeting of the Society was held at Milwaukee in the Trustees Room of the Public Museum on Monday evening, December 19. President McKern requested the fifty members in attendance to assist the Membership Committee in securing additional members. Secretary Brown presented a report of the director's meeting. The program of the evening consisted of a lecture on "The Black Hawk War" by Mr. Brown. The speaker presented a full account of this conflict of the Sauk Indians with the U. S. regular troops, and Wisconsin and Illinois militia in the year 1832. A collection of lantern slides, generously loaned by the Milwaukee Public Museum, was used in illustrating this story of the war.

At the close of the meeting exhibits of Indian specimens were made by several members.

The first regular meeting of the Society in the year 1933 was held at Milwaukee on the evening of Monday, January 16. President McKern directed the meeting. In the absence of Secretary Brown, Dr. Herbert W. Kuhm acted as secretary. The election of V. E. Motchenbacher, Rewey; Wm. K. Andrews, Milwaukee, and Elliott Cooley, Wauwatosa, as annual members of the Society was announced. Alton K. Fisher, Assistant in Anthropology at the Milwaukee Public Museum, spoke on "Ancient Diseases" explaining how, through a study of skeletal material, present-day scientists have been able to obtain valuable knowledge of the existence of various diseases among the prehistoric Indian inhabitants of the United States. Lantern slides were used in illustrating these. Joseph Ringeisen, Jr., gave a talk on "Fluted Stone Axes", discussing their manufacture and artistic interest. He exhibited thirty-one specimens of these taken from his own collection. Dr. L. S. Buttle exhibited two stone axes, one from Sheboygan and one from Ozaukee County, and six flint fleshers from northern Mississippi.

General

The principal exhibitors of archeological specimens at an Adult Hobby Show, held at the Y. M. C. A. at Madison, January 20-22,

were the Seeliger brothers, Dr. L. V. Sprague, L. R. Cooper and Ted Kouba. Mr. Cooper showed a collection of potsherds from a rockshelter in the Baraboo Range; Dr. Sprague, a fine collection of stone and copper implements from Wisconsin and Indiana.

A Madison group consisting of John J. Knudson, Chas. E. Brown, Dr. Sprague, E. R. Guentzel and Dwight Kelsey have been broadcasting an archeological program over WHA Radio Station. This has been widely heard and appreciated. Ted T. Brown has been broadcasting over the Green Bay station, and Will F. Bauchle over that at Beloit. The University of Wisconsin station was the first in America to broadcast an educational program.

The Milwaukee Public Museum has recently completed the restoration from single representative sherds of twenty pottery vessels of Aztalan ware. In each instance the sherd was sufficiently large and rich in detail to supply the needed information on size and shape. The restored vessels portray the shape and dimensions in a manner difficult to visualize from a casual examination of the sherd itself.

Notice: Send in your articles, letters and notes for the Archeologist immediately, in order to insure early publication. Editorial staff.

Obituary

The Wisconsin Archeological Society regrets to report the death, on December 2, 1932, of Mr. L. J. Pettit of Milwaukee, a life member. He became a member in 1903. His interest in the work of the Society continued to the time of his death.

P. E. Cox, State Archaeologist of Tennessee and Keeper of Archives and Museum in the State Department of Education at Nashville, died on October 25, 1932, of the effects of influenza. Mr. Cox was intensively active in the archeological field of his district and was known and admired by many of our local students.

Field Work

The resumption of archeological field activities in our sister state, Minnesota, under the capable direction of Dr. Albert E. Jenks, Department of Anthropology, University of Minnesota, is a fitting occasion for rejoicing on the part of students in Wisconsin and other adjacent areas. We need information from Minnesota in order to make cultural comparisons that will assist us in solving our own problems. We have been sorely handicapped in the past by the limited quantity of information available from this great field bordering our western frontier.

During the past summer, a thorough investigation of the site which had formerly produced the ancient remains of "Minnesota Man" resulted in the recovery of 355 additional skeletal specimens. In addition to this work, a habitation site on Blackduck Lake was excavated, producing burials, fireplaces, pottery, flint implements and a tubular stone pipe. A mound in Crow Wing County was also excavated, resulting in identifying the tumulus as a burial place, and the obtaining of data on mound structure.

We congratulate Dr. Jenks and his assistants on a splendid beginning and hope that he will find means for continuing the work of withdrawing the veil of the unknown from about the prehistoric first citizens of Minnesota.

Publications

A late report on The Discovery of Primitive Man in China, prepared by G. Elliot Smith, is contained in Publication 3164, reprinted from the Smithsonian Report for 1931, pp. 531-547, Washington, D. C. The separate report was issued in 1932.

J. G. McAllister is the author of an interesting report on Indiana archeology: The Archeology of Porter County, Indiana Historical Bulletin, Vol. 10, No. 1, Indianapolis, 1932.

The November, 1932, issue of The Masterkey, published by the Southwest Museum, Los Angeles, California, contains a very instructive article by Charles Amsden on Reviving the Navaho Blanket. Another article, by M. R. Harrington, gives a description of the Kachina Rockshelter, Nevada, so named after the kachina-like pictographs painted on the cave walls.

The February, 1933, issue of Hobbies contains, on pages 79-80, an account of a newly installed exhibit of Peruvian textiles in the Boston Museum of Fine Arts, and explains something of the story that these ancient, colorful fabrics have to tell of the prehistory of Peru.

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WISCONSIN ARCHEOLOGICAL SOCIETY

The Society is a state department, receiving a part of its support from the state. Its funds are under state control. Its work is well and widely known. It has received the approval of leading American archeologists, who agree that it deserves the full support of all Wisconsin citizens interested in the state's archeological history.

The Society's activities comprise the location, recording, investigating and preservation of Wisconsin Indian remains, folklore and history, all of which are rapidly disappearing and must be recorded and saved immediately if ever.

Through its efforts many fine groups of Indian earthworks and other aboriginal monuments and remains have been permanently preserved to the public. Most have been marked with descriptive metal tablets. Others are being protected. Surveys and explorations have been conducted in many sections of the state.

It is also engaged in encouraging the establishment of public museums and collections and in discouraging the manufacture and sale of fraudulent antiquities.

Regular monthly meetings of the Society are held during the months September to May, inclusive, in the Trustees Room of the Milwaukee Public Museum. Meetings are open to the public. No regular meetings are held during the months June to August, inclusive. Special field meetings are occasionally held during the vacation months.

The results of its research and other activities are made known through its regular quarterly publication, The Wisconsin Archeologist. Thirty volumes have appeared. The Society has a large membership distributed through every part of the state.

It is co-operating to the fullest extent with all of the various scientific and educational organizations and institutions of Wisconsin.

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Wisconsin Archeological Society

Milwaukee, Wisconsin

Incorporated March 23, 1903, for the purpose of advancing the study
and preservation of Wisconsin antiquities

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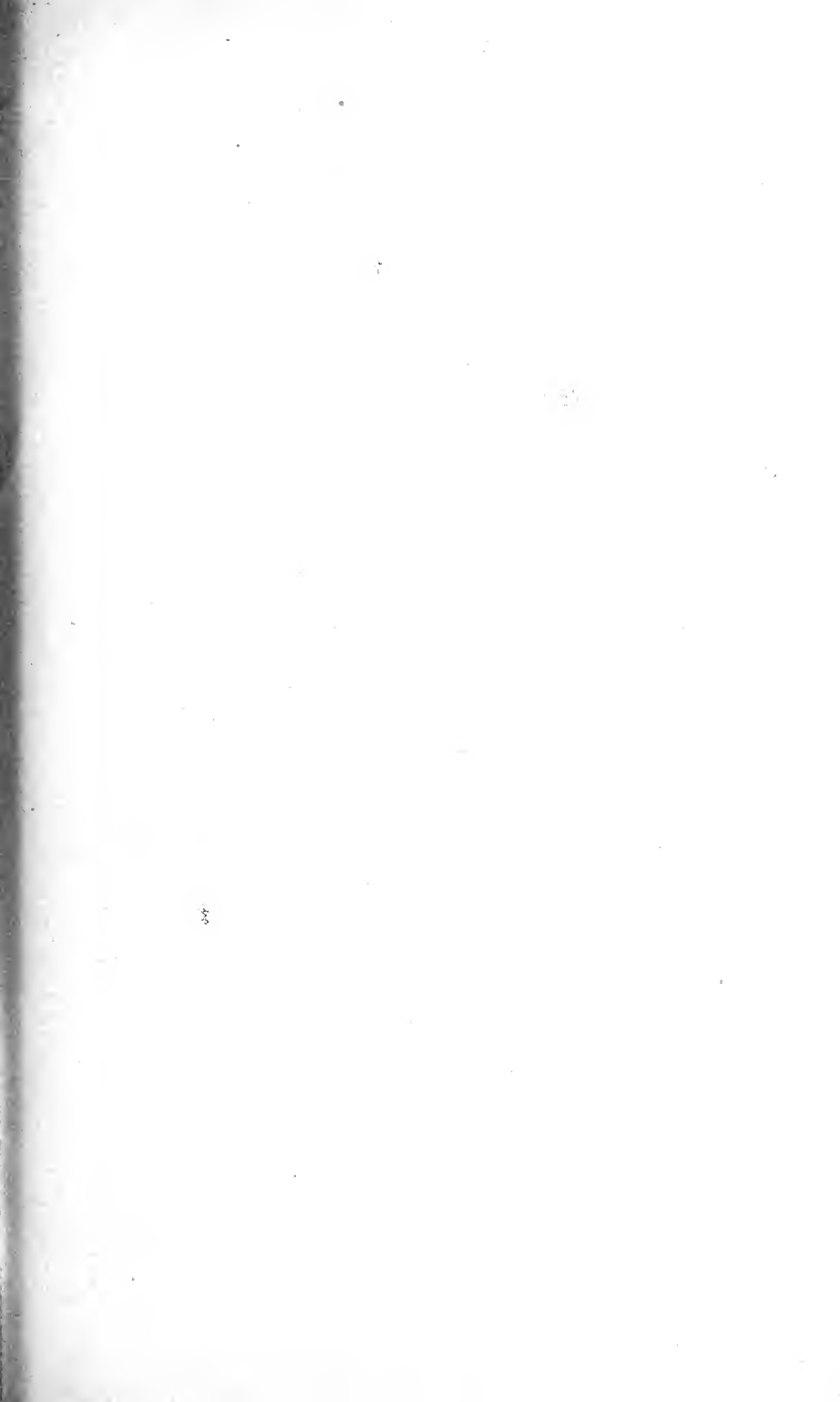
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Huron Herbert Smith, 1883-1933.

The Wisconsin Archeologist

Published Quarterly by the Wisconsin Archeological Society

Vol. 12

MADISON, WIS., APRIL, 1933
New Series

No. 3

WISCONSIN ARCHEOLOGICAL SOCIETY

RESOLUTION

WHEREAS, Our esteemed fellow worker and beloved friend, Huron Herbert Smith, has departed from this life; and

WHEREAS, The years of scientific service and accomplishment, and of brotherly fellowship, which he spent in our midst renders it fitting that we officially record our deep appreciation of those activities and that rare fellowship, and our sorrow and sense of infinite loss at their untimely cessation; therefore

Resolved, That this Society record its sense of personal bereavement and its sorrowful acknowledgement of loss sustained in the death of this professionally respected and personally beloved member, whose vitally active interest in anthropology, as expressed in his tireless efforts to advance the best interests of this Society, in his friendly and productive study of the Wisconsin Indians, in his important achievements in the field of ethno-botany, and in his strong devotion to service in answer to every call, as well as the fine spirit of cordial fellowship which won for him a lasting place in the hearts of all who knew him, will ever be held in grateful remembrance by his friends and former associates in the Society.

Resolved, That a copy of these resolutions be transmitted by the Secretary to any members of the family surviving the departed as a fitting expression of the profound sorrow and sense of heavy loss sustained by the Society, and of the sincere sympathy of its members with the bereaved in this hour of great trial.

WISCONSIN ARCHEOLOGICAL SOCIETY.

(Signed) *President*, W. C. McKERN.

Secretary, CHAS. E. BROWN.

Adopted March 20, 1933.

WINNEBAGO COUNTY ARCHEOLOGICAL AND HISTORICAL SOCIETY

Oshkosh, Wisconsin

RESOLUTION

WHEREAS, Because of the untimely death of Huron Smith, Curator of Botany at the Milwaukee Public Museum, the state of Wisconsin, and particularly the city of Milwaukee, has suffered an irreparable loss; and

WHEREAS, Feeling that it is a privilege to extend sincere sympathy to his family and associates and to record our realization of the profound effect of his passing upon the educational, religious, civic and fraternal life of the entire community;

Therefore, be it resolved, That the Winnebago County Archeological & Historical Society hereby tenders sincere sympathy and condolences to his daughter and to other relatives; to the State Archeological Society; the State Historical Society; and to his co-workers of the Milwaukee Public Museum; and

Be it further resolved, That a copy of this resolution be sent to Miss Smith, the daughter of Huron Smith; to Charles E. Brown, Secretary of the Wisconsin State Archeological Society; to Dr. Joseph Schafer, Superintendent of the Wisconsin State Historical Society; and to Dr. S. A. Barrett, Director of the Milwaukee Public Museum; and that this resolution be made a part of the permanent records of this society.

WINNEBAGO COUNTY ARCHEOLOGICAL &
HISTORICAL SOCIETY.

By (Signed) R. J. BARNES,
President,
GENE STURTEVANT,
Corresponding Secretary.

Adopted March 6, 1933.

HURON HERBERT SMITH

1883-1933

S. A. Barrett

Huron Herbert Smith, born at Danville, Indiana, July 26, 1883, received his early education in the local schools, and finally graduated from the Winchester, Indiana, high school. He then attended De Pauw University, from which institution he received the degree of Bachelor of Science in June 1902. From 1905 to 1907 he pursued graduate work in botany at Cornell University.

From 1907 to 1917 he was Assistant Curator of Botany at the Field Museum of Natural History, Chicago, where he worked especially on a botanical dictionary and where he collected and arranged a very complete North American dendrographic exhibit.

On January 2, 1917 he was called to the Milwaukee Public Museum to become Curator of Botany, which service he continued until the time of his tragic death on February 25, 1933.

In the World War he served in the troop transport section, U. S. to France, of the physical and educational section of the Y. M. C. A.

As the head of the Department of Botany of Milwaukee's Museum, Mr. Smith found a wide field in which to exercise his talents as an organizer and a scholar, and an exceptional opportunity to render service to the public in a multitude of ways. Ever ready to aid any individual or group of citizens, he was in great demand as a counsellor on botanical subjects and as a lecturer of great ability. He participated freely in civic activities and was ever ready to serve his community. He was a member of many civic bodies as well as various scientific societies.

His devotion to his profession is amply shown by the variety and excellence of the exhibits and groups of the Museum's department of Botany which have been created during the past 16 years, very largely through his personal knowledge and efforts.

At the same time he devoted much attention to scientific research. Many special problems in botany received his personal attention. More recently he has made a very exhaustive study of the uses of plants by the aboriginal inhabitants of Wisconsin, for which research he was especially fitted due to his unusual knowledge of botany and to his aptitude in acquiring Indian languages. In recognition of this service he was awarded the Lapham Medal by the Wisconsin Archeological Society on March 19, 1928.

Taking up this subject tribe by tribe, several excellent treatises on the Ethno-botany of Wisconsin¹ have come from his pen, and on the very day of his death he was approaching the completion of this great work.

There was in press at the time of his death, the fourth number in this series, "The Ethno-botany of the Forest Potawatomi"². This is just appearing and forms a fitting memorial number, the last completed work in the research to which his later days were devoted.

Many other valuable productions of his pen have appeared in the Milwaukee Public Museum's publications and in various other series, as shown by the appended list of his publications.

His lectures did much to enhance the Museum's courses of public instruction, and his readiness to cheerfully assist with particular and detailed information all those who sought his advice in his specialty furnished a feature of the Museum's service never to be forgotten by a multitude of Milwaukee's citizens.

None will so keenly miss him as his immediate associates and co-workers at the Milwaukee Public Museum. Jovial, friendly, sympathetic, cooperative, earnest, and ever ready to put his shoulder to the wheel of progress for his institution, his loss to us all is irreparable. His untimely, tragic, and truly needless departure from our midst will always seem unreal, for his spirit will always linger with us and we shall always feel uplifted due to our long association with him.

¹ Bull., Milw. Public Mus., Vol. 4, Nos. 1-3.

² Bull., Milw. Publ. Mus., Vol. 7, No. 1.

In all things which he undertook he was an enthusiast and a leader in forward movements of the various organizations to which he belonged; in none more so than in the work of the Wisconsin Archeological Society, where he was ever ready to serve the interests of the organization in every way. For many years he was a member of its Board of Directors and he served with distinction as its President in 1928 and 1929.

His research in ethno-botany brought him into close contact with many of the Indians in Wisconsin and he had an unusually wide acquaintance among them and counted many of them as warm personal friends. Perhaps nowhere will his loss be more keenly felt than among these real "first Americans" of our own state who thought so much of him that they adopted him into their tribes, initiated him into their secret societies and gave him the, to them, fitting appellation of "Flying Squirrel" in accordance with tribal custom.

His tragic end forms one of the saddest chapters in that too-rapidly-growing history of automobile hazards which are apparently the inevitable result of our modern so-called civilization.

At about 4 P. M. on the afternoon of Saturday, February 25, 1933, Mr. Smith left his office in perfect health and in the best of spirits. About an hour later, he was started for his old home at Pendleton, Indiana, in answer to a call which had just arrived telling of the death of a relative at that place. With him were Mrs. Smith, and her parents, Mr. and Mrs. Edward J. Clark. At 6:42 the automobile was gliding along on the Waukegan Road just south of the town of Glenview, Illinois, when, apparently without warning to the occupants of the car, it was struck by the fast moving "Minneapolis Flyer" of the Chicago, Milwaukee, St. Paul and Pacific line.

Catapulted through the air and in flames the vehicle struck a heavy cement and iron signal post which it snapped like a pipe stem. All four occupants of the automobile were instantly killed, and their mangled remains scattered along the railroad right of way. The automobile was but a mass of twisted wreckage.

Investigation shows that this is one of the most danger-

ous, sharp-angled crossings imaginable, so dangerous in fact that it is shunned by those who know it and so deadly that it is known locally as "death crossing". It is said that it has taken some forty lives in the past few years. Until the law compels grade separations at such dangerous crossings we must continue to pay thus dearly.

Here was almost a complete family wiped out of existence in the twinkling of an eye. The only survivor of Mr. Smith's immediate family is a daughter, Miss LaVaughn C. Smith. To her especially are our warmest sympathies extended.

The funeral services for the victims of this quadruple tragedy were held at the Menden church near the old Indiana home, the four burials being in the beautifully situated and peaceful churchyard immediately adjacent.

Many friends were unable to make the journey from Milwaukee to attend the obsequies. On Sunday, March 5, therefore, there was held in Milwaukee a Memorial Service, at the First Methodist Episcopal Church, where a thousand or more of friends and associates, assembled to do honor to the memory of both Mr. and Mrs. Smith whose active life in the community since 1917, had endeared them to a vast number.

Organizations with which Huron H. Smith was associated:

Wisconsin Archeological Society, past president.

American Anthropological Association, member.

Midwest Museums Conference, member.

Wisconsin Academy, Sciences, Arts and Letters, member.

Wisconsin Historical Society, member.

American Association for the Advancement of Science, fellow.

City Club, of Milwaukee, member.

Kiwanis Club, past president.

Sigma Nu, member.

Milwaukee Chapter, Izaak Walton League, director.

Wisconsin and Upper Michigan Florists Assn., Sec., Treas.

Milwaukee County Horticultural Society, president.

Wisconsin Florist's Association, honorary member.

Garden Club.

Wild Flower Preservation Society, member.

Milwaukee Florist's Club, Honorary member.
Y. M. C. A., member.
Parent-Teachers Association, member.
Kenwood Lodge, F. and A. M., member.
Acacia, member.
Milwaukee Council, Boy Scouts of America, member.
National Geographic Society, member.
First Methodist Episcopal Church, member Board of Stewards.

LIST OF PUBLICATIONS AND CONTRIBUTIONS BY
HURON H. SMITH

In the Milwaukee Public Museum Bulletin Vol. 4.

1923. No. 1, pp. 1-174. Ethnobotony of the Menomini Indians.
1928. No. 2, pp. 175-326. Ethnobotony of the Meskwaki Indians.
1932. No. 3, pp. 327-525. Ethnobotony of the Ojibwe Indians.

In the Milwaukee Public Museum Yearbook.

1921. Vol. 1, pp. 48-56.
1. Botany Collecting in Vilas County Wisconsin.
2. Ethno-botonical Collecting on the Menomini Reservation.
1922. Vol. 2, pp. 113-133; 186-194.
1. Botanical Collecting in Southwestern Wisconsin.
2. Woodcraft.
1923. Vol. 3, pp. 27-46.
1. The Red Earth Indians.
2. Botanizing among the Ojibwe.
1924. Vol. 4, pp. 67-94; 149-186.
1. A European Botanical Trip.
2. Some European Botanical Gardens.
1925. Vol. 5, 68-76; 135-161.
1. Among the Potawatomi.
2. European Museums.

1926. Vol. 6, pp. 153-162.
The Fourth Botanical Congress.
1928. Vol. 8, pp. 76-82.
Among the Winnebago.
1930. Vol. 10, pp. 252-266.
Indian Place Names in Wisconsin.
1924. Milwaukee Public Museum. Key to the Mushrooms
of the Milwaukee Region (Mimeographed).
1931. Milwaukee Public Museum. Field Guide No. 1,
Botanical Series. pp. 87.
Mushrooms of the Milwaukee Region.

Contributed to:

- Botanical Gazette.
F. D. T. News.
Florists' Exchange.
Florists' Review.
Flower Grower.
Kiwanis Magazine.
Wisconsin-Upper Michigan Florists' Association
Bulletin.
Wisconsin Farmer.
Wisconsin Horticultural Magazine.
Wisconsin Magazine.

RECENT EXCAVATIONS AT AZTALAN

S. A. Barrett

Like so many places of first importance which are not visited because they are located so near home, Aztalan, the most important single archeological site in the state of Wisconsin, is passed by most of us with only an avowal of intention to "some day, when I have more time" stop and see it. So it was in the author's own case. He had lived in Wisconsin for nearly nine years before an opportunity was presented to visit it. This came in 1919 when Mr. George A. West, invited the author to accompany him to the site. Mr. West's long years of keen interest in Wisconsin archeology are most familiar to members of the Wisconsin Arche-

ological Society, for it was due to his activities that the society was organized. This interest had taken Mr. West many times previously to Aztalan, and he had frequently described to the author the features of the old site. However, it is really difficult to convey a proper conception of such a spot, and the author was not prepared for what he saw when he arrived on a bright May morning at the expanse of this ancient earthwork lying on the gently sloping terrain just west of the Crawfish river.

First the "embankment" or "wall" was traced out, then various mounds were inspected, and finally many spots which showed evidences of house sites were viewed. The farther we went the higher mounted our enthusiasm. The magnitude, the variety of features, the uniqueness of many aspects of the site, all were most fascinating.

But our greatest surprise was reserved for the immediate river bank, for here the surface waters, coursing down from the west, had recently cut a deep ravine, right through a four-and-a-half foot layer of kitchen refuse. From its vertical walls protruded potsherds, stone implements, fragments of the so-called bricks and fragments of bone without number. What a wonderful opportunity for some real digging! Arrangements were shortly completed with the owners of the properties upon which the site is located, which permitted the Milwaukee Public Museum to conduct excavations during the summer of 1919.

The results of this first season were most gratifying and many of the intricacies of the old site were solved during those first three months. However, it would be quite too much to expect to solve the whole of the age old riddle of Aztalan in so short a time, for it must be remembered that the "enclosure" alone embraces more than twenty-one acres, to say nothing of the many mounds and other features lying without its confines.

Consequently another season's work was deemed necessary and the summer of 1920 was also spent at this same work. With the discoveries already made during the previous season, the work progressed this second year with the utmost rapidity. By the end of this second season we felt that we knew pretty well what the answers to most of the

questions concerning Aztalan should be, and preparations were made to at once publish the results of the work.

Unavoidable delays have, however, prevented this. Regrettable as this might on the surface appear, it has had its virtue, for considerable work has meantime been done in adjacent archeological fields and we are now in possession of much more and better data for comparison than would have been the case had we gone to press at once as originally planned.

When early in 1932 we again took up the writing on the results of these excavations, we gave very special attention to certain features, in reviewing the previous work, where there appeared to be a discrepancy between our findings and those of Dr. I. A. Lapham, that great pioneer of Wisconsin archeology whose careful work has for so many years been a classic in this field. Our particular concern was to reconcile what now appears on the surface in the southeastern corner of this site with the quite different surface findings shown by Dr. Lapham in his survey of 1850. Excavation only would determine which was correct.

We cannot do better than to quote verbatim from the paper entitled "Ancient Aztalan" which the Milwaukee Public Museum has just brought off the press and which constitutes Vol. 13 of its bulletins. On pages 97-99 we read:

"Upon again taking up the final study of these details in 1932 we were particularly struck by what appeared to be marked dissimilarities between our plat ----- and that of Dr. Lapham made in 1850 ----- Our embankment as then platted stopped well up on the brow of the second river terrace with a well rounded "buttment" -----, which had all the appearance of the very end of the embankment. This was a good two hundred feet west of the river. The terrain then sloped rather abruptly eastward to a first river terrace and finally rose slightly at the river bank itself. Along the river bank at this point there was a ridge one hundred and sixty feet long which had somewhat the form of an effigy mound. This we knew to be artificial from our former work.

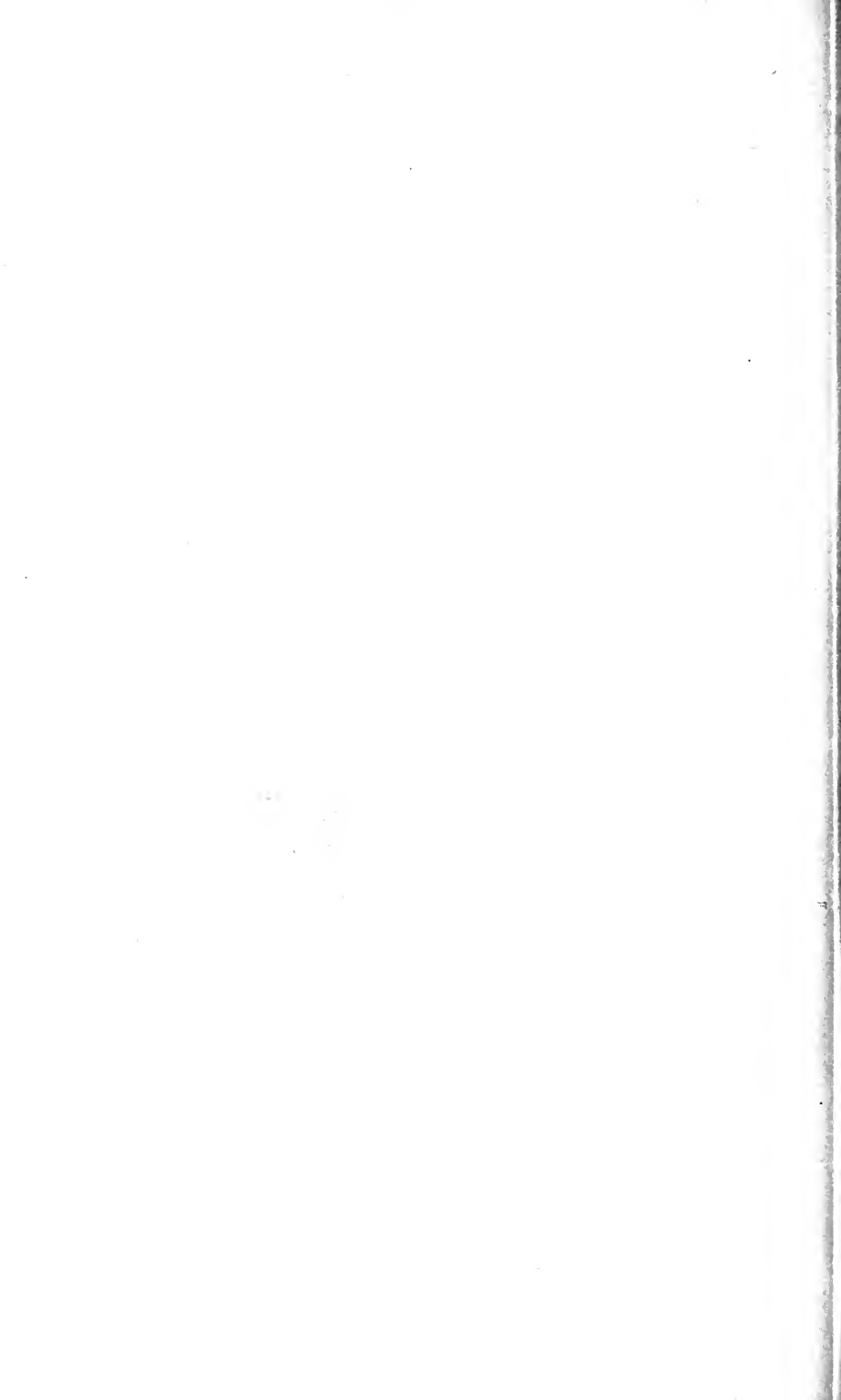
"Dr. Lapham's map on the other hand showed the enclosure embankment running down to the river and showed three "buttments" between our last buttment ----- and



Fig. 10. View of southeastern corner of Aztalan enclosure.



Fig. 11. View of excavations along one side of an Aztalan tower.



the river. The easternmost of these coincided with the southern end of our effigy-like artificial ridge along the river bank.

"Which of these two was correct? Did the stockade turn northward from our last buttment ----- and run along the brow of the second terrace (incidentally, a most logical thing for it to do), or did it continue on down to the very edge of the river bank as indicated by Dr. Lapham? We were inclined to believe the latter to be the case, but determined to, if possible, obtain definite proof.

"We again visited the site and, by going some distance out on the old marsh flat toward the south, we caught the slightest indication of two rises in the low area, here referred to as the first river terrace, between *d* and the river bank. A careful examination of this area lead to the conclusion that if Lapham's plat was correct and if there had been an embankment with tower bases in this low area, this part of the earthworks had been obliterated by the water. This we later proved to be the case. The sources of this destruction were two. At times of high water the river overflows its banks. Just north of the northern end of the effigy-shaped section of the river bank above referred to there is a slight depression which would give the waters of the river an inlet into the low area behind this effigy-shaped section and thus permit it to scour out a channel and wear down this portion of the old embankment which ran transverse to the course of the water. In the second place we found that the lay of the land to the northwest was such that the surface water from heavy rains would drain from a considerable area of the land up toward the southwestern pyramid. These two sources of water had apparently produced enough erosion to account, in part at least, for the fact that the whole section of the aboriginal embankment -----, a length of fully one hundred and forty feet, and including two "buttments" ----- had been so far obliterated that it almost called upon the imagination to see two slight indications of where these "buttments" had been in Dr. Lapham's day.

"A second factor tending toward the obliteration of this section of the embankment was the fact that when originally built the embankment was several feet higher than this first river terrace which it crossed. There was thus

created just north of it a considerable depression which was gradually filled in by the deposition of silt from the waters which were slackened in their speed as they encountered the embankment. Similarly there was doubtless some filling on the outer or southern side of the embankment.

"It would seem probable, therefore, that it was really a combination of erosive and filling actions which caused the disappearance of this section of the embankment.

"The owner of this property, Mr. Emil Riedeman, who had so kindly permitted our former excavations, was again consulted, with the result that we again undertook excavations here, with the specific objective of settling this question of the stockade system at this corner of the enclosure.

"This work was begun on June 27, 1932, with the assistance of Mr. Theodore L. Riedeman, son of the owner, and three other young men residing in the vicinity.

"Work was begun on the upper level where the outlines of the embankment were perfectly plain. The probable locations of the tower bases ----- were laid out and within a very few minutes one of the workers had uncovered the first line of post holes, on the western side of the tower base ----. Very soon thereafter the first of the post holes at *d* was encountered. Mention is made of this fact to show how uniformly these works were built by the ancients. Our experience of 1919 and 1920 elsewhere in these works enabled us to predicate to within a foot or two just where these post holes were located.

"Having once located the first post holes, the lines were followed right along, the tower bases worked out, and the various other features unearthed rapidly and with relative ease. Thus within ten days we were able to locate three hundred and fifty feet of the stockade along the south wall, including five tower bases, and to excavate these completely. In addition to this we ran the line at intervals for a distance of three hundred feet along the eastern side of the stockade. All told in this short time we definitely located approximately seven hundred post molds.

"Furthermore, we had again demonstrated the accuracy and the care with which Wisconsin's pioneer archeologist had done his work, for in the depression ----- we had found the stockade to be complete and to have the tower

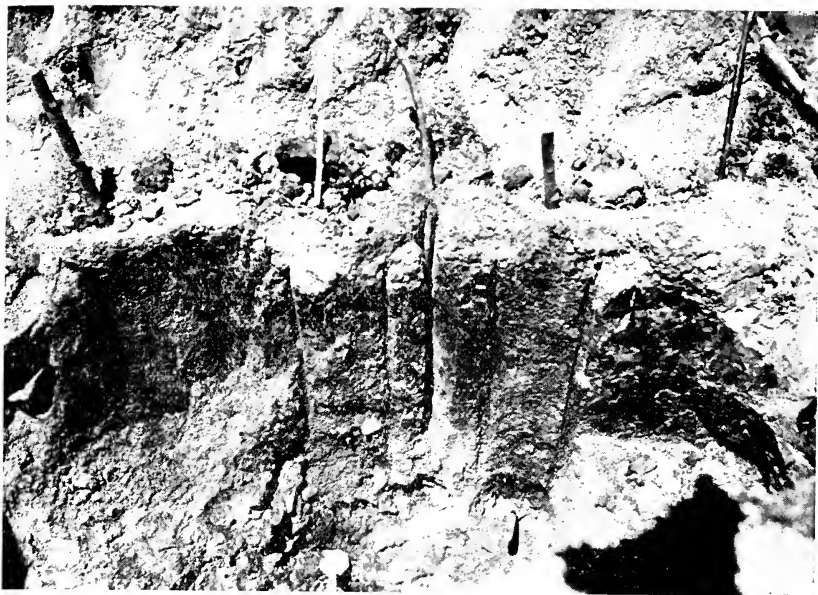


Fig. 12. Outlined molds of postholes at Aztalan.



Fig. 13. Post molds marking the former walls of the Aztalan enclosure.



bases, exactly as Dr. Lapham had indicated, even though almost every surface indication of these had been obliterated subsequent to his survey in 1850."

Illustrations of part of this work are shown in figures 10 to 13.

In figure 10 we see a general view of this southeastern corner of the enclosure and, looking across the river, we see the rather steep embankment rising from its eastern shore. Here we see some of the workers excavating a portion of the south "wall" of the enclosure which crosses the first river terrace above referred to.

In figure 11 we have a close up view of the western side of tower *d* showing the stakes used to mark the positions of the post holes as these were successively uncovered.

In figures 12 and 13 we have two views of a group of post holes on the eastern side of tower *b*. Here are the holes filled with the loose earth accumulated as the posts slowly rotted away, and then these same holes with this loose earth removed and showing more perfectly the post molds. In two of these are remnants of the lower ends of posts, and in one we see slabs of stone inserted to help support the post in this soft, marshy ground.

Another matter which engaged our attention in 1932 was the ridges shown by Lapham's survey as appearing within the enclosure. We had reason to believe that these did not represent, as stated by earlier writers, elevations placed here to serve as house bases, but that they were in reality the lesser embankments thrown up along the bases of inner stockades. It must be remembered that after some eighty years of cultivation every vestige of these embankments has disappeared. Our only means of locating them, therefore, was by scaling up Lapham's plat and measuring off on the ground as accurately as might be to determine the former location of each ridge. Upon excavating at such points a transverse trench we were soon able to locate the line of posts, and it was then a relatively easy matter to follow such a line throughout its extent. In this way we unearthed hundreds and hundreds of lineal feet of these inner stockades, with occasional gates and with much more frequently placed tower bases, and we were thus able to make the story of Ancient Aztalan much more complete.

In fact when we had all these facts assembled and all our data pieced together we had a pretty perfect picture of what Aztalan originally was. For instance, in connection with the most striking feature of the site, the stockade enclosure, we may again quote from the above paper (pp. 77-78) :

"There was first of all the outer stockade, 4,400 feet in length, completely surrounding this area of over twenty-one acres. This was a single line of heavy posts on the north, west and south and a double line along the river on the east. About its base was heaped, both inside and out, a heavy embankment of earth to further strengthen the stockade. The posts, each about a foot in diameter, were set so close together that they almost touched. They were buried to a depth of about seven feet in the embankment, and the stockade had a height of about twelve feet above the top of the embankment. At relatively regular intervals (about every eighty feet) along the outer side of the stockade were "square" watch-towers which may even have been somewhat elevated above the top of the stockade. These towers were large enough to accommodate perhaps eight or ten fighting men each, who stood upon a floor which brought them up so that they could almost look over the top of the tower wall. Within, each tower was provided with stones which might be hurled against the enemy from these vantage points. There were also pottery vessels filled with water to be used to extinguish fires which might be applied by a besieging force to the stockade.

"All along inside the stockade, and thus connecting the successive towers, there was a runway which enabled the defenders to move from point to point and from tower to tower, the more easily to shift fighters to points where they were most needed and to serve missiles to those requiring them in battle. This runway was placed just far enough below the top of the stockade so that those passing along it could do so with complete safety.

"Fire, always a dreaded hazard even in aboriginal warfare, was especially dangerous in such a stockade as this. The posts of the stockade were therefore not left exposed to such danger. This entire wall was covered within and without with a plaster layer several inches in thickness. It was made of a mixture of clay and grass, so that this whole

structure resembled much more one of masonry than one of wood.

"There were loopholes which pierced the stockade and the walls of the towers at frequent intervals and through which the defenders might shoot their arrows at an approaching enemy with deadly effect.

"Access to the settlement was through several narrow gates, so placed as to be within easy bow-shot of two or more towers.

"The inner stockade walls probably differed little in general features of construction from this major outer wall. The first was a single wall, only a short distance inside the main stockade. The second was a double line which formed the last defense of the village which was located chiefly, if not wholly, within it.

"The wall along the river front was again a double one, but apparently its location so near the river made other outer walls unnecessary."

Throughout every feature of this site we find that there is an assembly of cultural traits: stockades, house construction, "bricks", cannibalism, certain stone implements, and particularly pottery and other items which are entirely foreign to the usual Wisconsin types. In casting about for affiliations we find that our nearest similar culture connections are with the ancient peoples of the Middle Mississippi region, those who occupied Cahokia and other similar sites. In other words we have here in Wisconsin, at Aztalan, a tiny island of Middle Mississippi culture, located in this northern land, the most northerly outpost thus far discovered of this distinctly southern type.

A New Method in Pottery Restoration

In speaking the several pottery restorations made from Aztalan sherds, reference has been made²⁹ to a newly devised method for restoring pottery vessels from relatively small fragments. In this publication the author endeavored to make a fairly complete study of the pottery³⁰ fragments

²⁹ Ancient Aztalan, Milw. Publ. Mus., Bull. Vol. 13, p. 305, 1933.

³⁰ Ibid. pp. 298-344, and plates, 73-100.

from this old site, for they unquestionably form one of the most striking and interesting features of this ancient culture.

In no case was a pottery vessel found intact and unbroken. In fact in only a few instances have enough sherds of a single vessel been found to make a fairly complete restoration from the original fragments themselves. In only a few instances have such restorations as that described by Mr. Wolff³¹ been possible. A great majority of the vessels in this collection are represented by very fragmentary remains. This is hardly to be wondered at when we consider that most of these specimens were originally deposited in refuse pits or left about house sites, and what is perhaps even more to the point, that this site is one which has been under cultivation for over three-quarters of a century. By the very nature of things, therefore, if any fairly complete remains of a vessel were present it would be quite accidental.

However, many fragments, showing characteristic forms and excellent decorative designs or coloring, were secured and, in the course of analyzing these to determine their characteristics, the author experimented with several methods of projection to determine the diameters, height, form and other essential features of a given vessel.

It was found that if there was present even a relatively small fragment of a vessel, but one giving certain characteristics, the whole vessel could be determined. The essential characteristics necessary, are: (1) the vertical section of the lip, neck and shoulder, (2) the vertical curvature of the side, (3) the horizontal curvatures of 1 and 2, and (4) the thickness of the wall. Thus if we possess a rim sherd which extends down even slightly below the shoulder of the pot, or if we possess a series of sherds which together do this, we have all that is necessary to determine these several essential features.

The vertical sectional features are most easily determined by actually setting the sherd up in position with the aid of plastilene or clay. Special care must be used to see that the lip of the pot has its proper original relation to the neck,

³¹ Milw. Publ. Museum, Yearbook, Vol. X., pp. 309-314, 1932.

shoulder, and side, for upon this depends all other determinations. Due account must be taken of the form of the mouth of the pot, as to whether it is circular, elliptical, or angular and as to whether it has lugs or handles. Having carefully and firmly set this sherd in place, then a sheet of plastilene, perhaps a quarter of an inch in thickness is raised vertically on the outer surface and worked in to con-

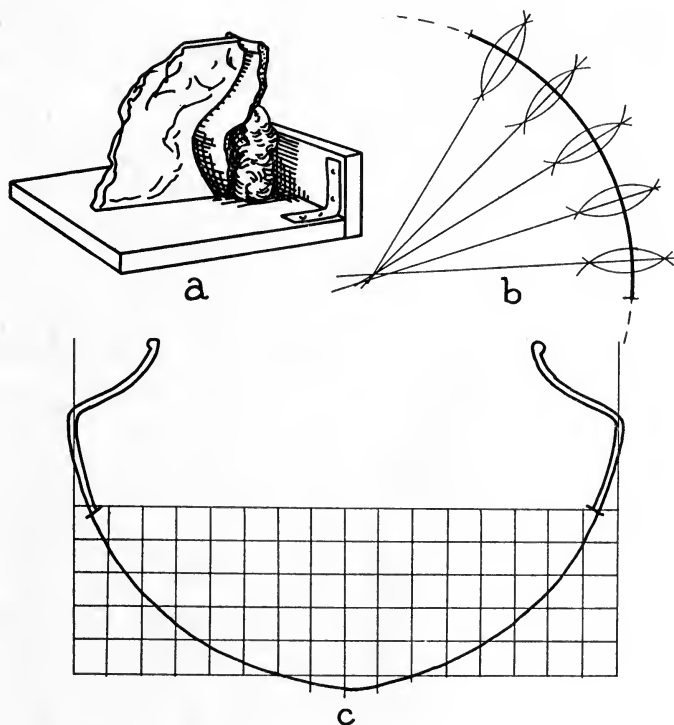


Fig. 14. (a) Rimsherd in true vertical position with plastilene sheet in place; (b) radii erected on the arc of the rim to determine center of rim circumference; (c) projected cross section of pot.

form exactly to the vertical section, as shown in figure 14 a. A fairly long base is left on this sheet. The sheet is then carefully removed from the side of the vessel. It is laid down and with the above mentioned base as a line from which to reckon, the vertical features can be drawn directly or can be easily projected. The thickness of the lip, neck and body of the pot are easily determinable with calipers, and with these all the vertical sectional features are in hand.

The horizontal features are relatively easy to determine. These are diameters and if any one can be determined accurately, the others can be found by computation from the vertical section already in hand. Usually there is some particular part of the sherd which shows a sufficiently horizontal section so that it can be placed directly on paper and traced. In more difficult cases shadow projection may be employed. In either case the result is the arc of a circle. By the simple expedient of erecting a series of radii on this arc, the center can be easily determined as shown in figure 14 b.

From these determinations a complete cross section of the pot can be projected as shown in figure 14 c. Thus all the dimensions are at hand and their complete tabulation is possible: heights and diameters of body, neck and rim; and so on.

With these in hand it seemed entirely possible to reconstruct such a vessel, but to do this by the old "cut and try" method is very time consuming. There should be a short cut of some kind which would greatly facilitate this operation. The old "potter's wheel" suggested itself. Why could not a device be made involving this principle which would enable us to spin up a clay core representing the interior of the vessel, and onto which the sherd or sherds could be placed and then the remainder of the pot completed in plaster or some other medium?

Such a "potter's wheel" base with a template representing one half the cross section of the pot should serve this purpose.

The matter was discussed with Mr. W. C. McKern, Curator of Anthropology, and with Mr. Wolff who had already made some very good restorations of pottery by the older method. Mr. Wolff immediately set about experimenting with this idea and the final result is shown in figure 15. A wooden turntable covered with a sheet of cel-luloid forms the base of this device. Four dowel pins hold the lump of clay in place. A hardwood template is clamped to an upright which holds it firmly. The template is cut on an angle so as to have a sharp, cutting edge which, as the turntable spins the lump of clay around, cuts and sizes

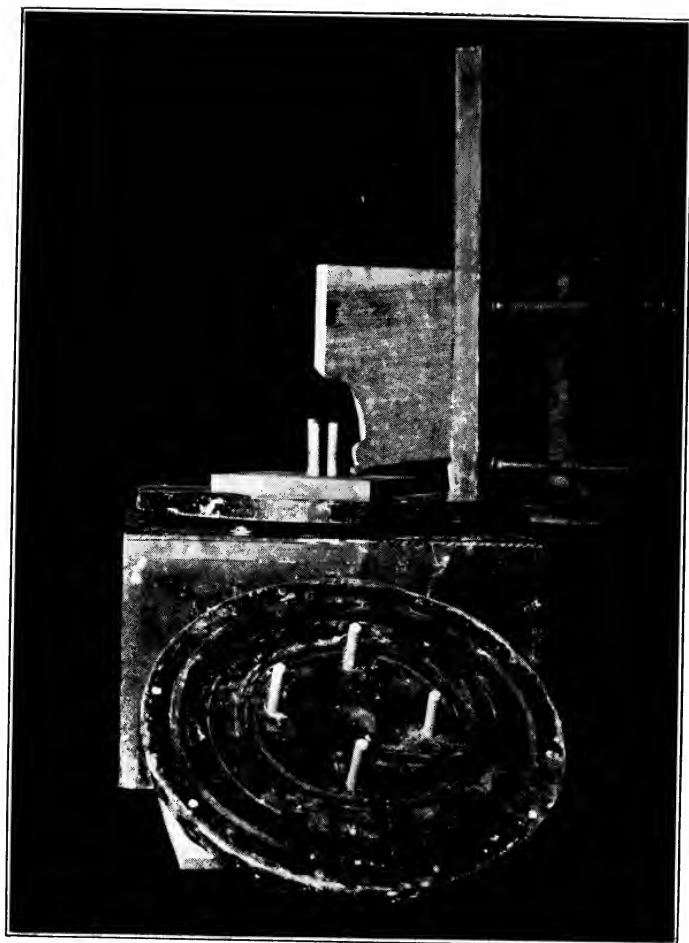


Fig. 15. Turntable apparatus for turning out clay form.

it to the exact form of the interior of the vessel, as shown in figure 16.

Next the sherds are applied to this clay core and carefully fitted together as far as this is possible. Clay is then added to fill out and complete the remainder of the walls of the vessel, again using the template as a guide. This outer surface is finally smoothed, and the decoration, if any, is worked out in the soft clay. Thus when this stage of the process is completed, as shown in figure 17, we have the outer surface of the vessel complete and exactly as it was in reality.

Next some lumps of wax are placed on the potsherds themselves. These serve somewhat the purpose of dowels and hold the sherds firmly in place when the clay is later removed from the interior.

The next step is to cover the entire pot with a thin layer of plaster which is tinted in some distinctive shade as a safeguard in its later removal. When this has hardened another layer, and if necessary a third is applied, each of a different color.

Finally the vessel with its clay core and its plaster covering is removed from its base. The clay core is completely dug out. Thus we have a plaster mold of the outer surface of the complete pot, with the actual sherds firmly in place. The appearance of this mold with the clay removed is shown in figure 18.

The interior next engages our attention. Plaster, tinted to approximate the color of the sherds, but sufficiently different to form a suitable contrast, is then placed on the inside of this mold and the missing sections of the walls of the pot are thus built up to the thickness of the sherds. Finally a layer of fabric, usually a light scrim, is added on the inside and worked into the soft plaster in order to reinforce these walls.

It is sometimes even necessary to make these walls slightly thicker than those of the original vessel in order to get proper strength in the finished specimen. However, since it is the exterior and not the interior of the specimen which is to be viewed in an exhibit, this thickening is not noticeable.

The final step is the chipping off of the outer layers of

plaster. This must be done with considerable care in order not to chip or damage the outer surface of the finished product. Here we see the virtue of having tinted these outer layers of plaster. As we chip off one after another of these layers we can easily tell just how far the process of removal has gone. Figure 19 shows this chipping process partly completed.

Figure 20 shows the pot after it has emerged from its "matrix", so to speak, and is ready for exhibition.

The parts which have been supplied in plaster are sufficiently different in color so that they are easily distinguishable from the actual sherds themselves. The result is an accurate reproduction of the vessel in form, size, decoration and other features, and withal a very satisfactory exhibit.

By this relatively simply mechanical device it has been possible to reconstruct in a few hours, from a relatively small sherd, a complete restoration, which would have, with the old "cut and try" method, required days of arduous labor.

That this is a practical method is shown by the fact that Mr. Wolff has reconstructed in this way two dozen pottery vessels from our Aztalan sherds. These give the visitor to the Milwaukee Public Museum's pottery exhibit a very clear idea of the pottery used by the ancient inhabitants of Aztalan long before the advent of the white man.

No other site in Wisconsin has yet produced such a variety of forms and decorative motifs as are shown here at Aztalan. The wide range of forms in the Middle Mississippi ware alone is shown in plate 97 of the above-mentioned paper, and the typical rim and lip forms in plate 100.

COMMENTS ON THE DISCOIDAL

A. H. Sanford

A fine specimen of perforated bi-concave disk came into possession of the La Crosse Teachers College a few years ago. It was a gift from an old lady in whose family it had served for many years as a door stop. The material is green stone (diorite). The circumference is not a true circle, the diameter varying from four and one-half to four and three-



Fig. 16. Clay on the turntable in process of being shaped by template.



Fig. 17. Completed pottery form in clay with sherds set in place.

quarters inches. Similarly, the width of the edge varies from one and one-half to one and three-sixteenths inches. The perforation is about three-quarters of an inch in diameter. The disk is well polished from use. It was originally found a few miles north of La Crosse.

The 24th Annual Report of the American Bureau of Ethnology has on pp. 5-10 cuts showing several similar disks. In the study of "Games of North American Indians" by Stewart Culin, in this volume (p. 511) is the following description of a game in which such a disk as this was used. The quotation is taken from Henry A. Boller, "Travels in the Interior of North America", (translation by H. Evans Lloyd, London, 1843).

"The favorite game appeared to be one which we called billiards and a space outside the pickets of the village was beaten as smooth and hard as a floor by those engaged in it. This game was played by couples; the implements are a round stone and two sticks 7 or 8 feet long, with bunches of feathers tied at regular intervals. The players start together, each carrying his pole in a horizontal position, and run along until the one who has the stone throws it, giving it a rolling motion, when each watching his chance throws the stick. The one who comes nearest (which is determined by marks on the sticks) has the stone for the next throw. Horses, blankets, robes, guns, etc., are staked at this game, and I have frequently seen Indians play until they have lost everything".

The scene is located in North Dakota and is represented pictorially by Plate X, opposite p. 511.

The following quotation of Lewis and Clark is taken from their Journals, Vol. I, p. 143 (Biddle edition 1814) :

". . . Notwithstanding the extreme cold, we observe the Indians at the village engaged out in the open air at a game which resembled billiards more than anything we had seen, and which we inclined to suspect may have been acquired by ancient intercourse with the French of Canada. From the first to the second chief's lodge, a distance of about fifty yards, was covered with timber smoothed and joined so as to be as level as the floor of one of our houses, with a battery at the end to stop the rings; these rings were of clay-stone and flat like the chequers for drafts, and the

sticks were about four feet long, with two short pieces at one end in the form of a mace, so fixed that the whole will slide along the board. Two men fix themselves at one end, each provided with a stick, and one of them with a ring: they then run along the board, and about half way slide the sticks after the ring".

Catlin in "The Manners, Customs and Conditions of the North American Indians, Vol. I, p. 132, (London 1814) describes a game which is of interest in this connection.

"The games and amusements of these people are in most respects like those of the other tribes, consisting of ball plays—game of the moccasin, of the platter—feats of archery—horse racing, etc.; and they have yet another, which may be said to be their favorite amusement and unknown to the other tribes about them. The game of Tchung-kee, a beautiful exercise, which they seem to be almost unceasingly practising whilst the weather is fair, and they have nothing else of moment to demand their attention. This game is decidedly their favorite amusement, and is played near to the village on a pavement of clay, which has been used for that purpose until it has become as smooth and hard as a floor. For this game, two champions form their respective parties, by choosing alternately the most famous players, until their requisite number is made up. Their bettings are then made, and the stakes are held by some of the chiefs or others present. The play commences (Fig. 59) with two (one from each party), who start off upon a trot, abreast of each other, and one of them rolls in advance of them, on the pavement, a little ring of two or three inches in diameter, cut out of a stone; and each one follows it up with his "tchung-kee" (a stick of six feet in length, with bits of leather projecting from its sides of an inch or more in length), which he throws before him as he runs, sliding it along the ground after the ring, endeavoring to place it in such a position when it stops, that the ring may fall upon it, and receive one of the little projections of leather through it, which counts for game, one, or two, or four, according to the position of the leather on which the ring is lodged. The last winner always has the rolling of the ring, and both start and throw the "tchung-kee" together; if either fails to receive the ring or to lie in a certain position,

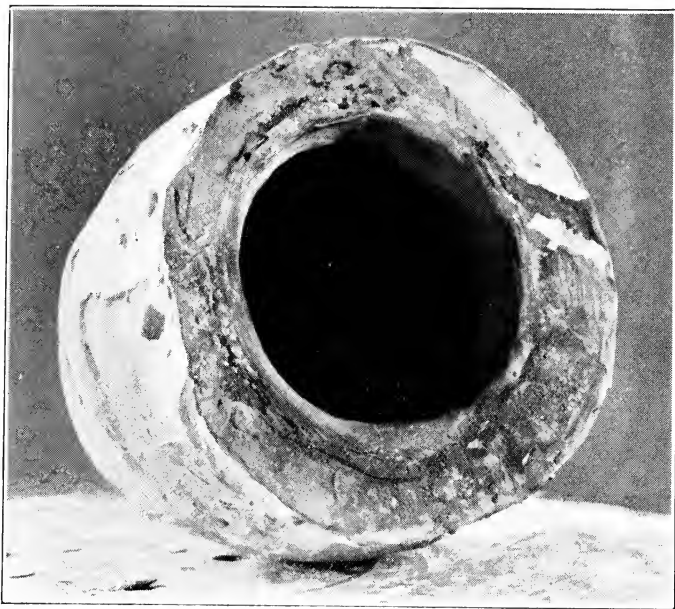


Fig. 18. Plaster-covered mold with clay removed from interior.

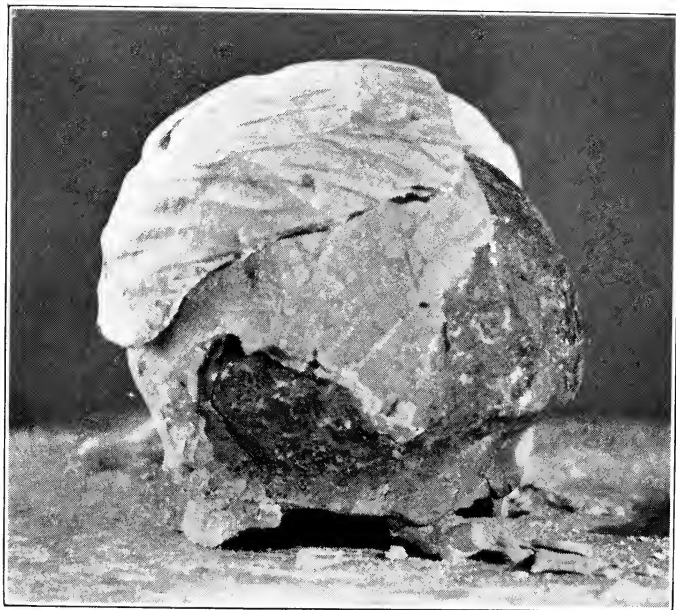


Fig. 19. Restored pot with plaster mold partly removed, showing separate layers of plaster.



it is a forfeiture of the amount of the number he was nearest to, and he loses his throw; when another steps into his place.

"This game is a very difficult one to describe, so as to give an exact idea of it, unless one can see it played—it is a game of great beauty and fine bodily exercise, and these people become excessively fascinated with it; often gambling away everything they possess, and even sometimes when everything else was gone, have been known to stake their liberty upon the issue of these games, offering themselves as slaves to their opponents in case they get beaten".

AN EXCEPTIONAL WISCONSIN POT

Iran T. Otto

On a sand-blow situated on the south bank of the Fox River, in Green Lake County, which my friends and I call the River Blow, we had been finding for a number of years very rough, stone-tempered, cord-imprinted and fingernail-marked potsherds. This type of sherd was found as far back as 1926. Never more than three or four pieces were found at a time and there was no evidence of a great amount of pottery.

Because the blow was isolated it was seldom visited by anyone except our own party, but it was one of our camp sites that always produced something of interest.

One Sunday afternoon, in the latter part of May, 1931, we drove to this blow for the purpose of getting a drink at the flowing spring near there. Later I was walking around the blow, carefully inspecting every article I could see in hopes of finding a perfect arrow-head or a bit of copper, when I noticed a few sherds of pottery lying half covered in the sand. As I have always done, I began to dig around the sherds with my fingers and I found a few more sherds below the surface. As I was without tools I marked the place and started to walk towards the car, looking carefully for any other signs of pottery, or other artifacts. I selected such tools as a wisk-broom, a grape-fruit knife and a small shovel. Then I went back and started to dig. About eight or ten inches below the original surface of the blow, I be-

gan to find larger sherds of pottery including large pieces of rim. The rim had the same type of designs as we had found on previous visits. I slowly uncovered the sherds, being careful not to break any of the larger pieces which were very soft. The last piece of pottery uncovered, about eighteen inches below the surface, was the bottom of the pot, which was flat. After brushing all the pottery with the utmost care, I took photographs of the pieces as they were laid out on the sand, and a few measurements. I left the pottery on the sand for about an hour to dry in the sun. Then carefully removing each piece, I wrapped it in newspapers. I took it home and with closer inspection found it to be at least three quarters of a tall, flat-bottomed pot, shaped somewhat like the ordinary flower pot, which I judged it to be about eighteen inches high and ten inches in rim diameter. I then took the pieces to the Milwaukee Public Museum, where the vessel was restored and is now on exhibition.³²

RUBBISH

Alton K. Fisher

Rubbish is generally considered to be the useless residue of our daily occupation which is fit only to be destroyed so that we may no longer be bothered by its presence. From the modern point of view such an attitude is probably correct, but no truly scientific archeologist views the rubbish piles of ancient peoples in the same manner, particularly if those people had no written records. Rubbish heaps of both ancient and modern origin are essentially alike. If an artistic decoration becomes irreparably broken or outmoded it is thrown in the rubbish box. When dishes and implements of various sorts are broken or become useless they receive a like fate. Food refuse also is treated in the same manner. All of these materials steadily accumulate in heaps and if their presence causes no inconvenience they are forgotten and gradually they become a part of the land. It is fortunate for archeology that human beings all over

³² This is the first vessel of this character known for Wisconsin of which a sufficient number of parts were found to permit complete, accurate restoration. *Editor.*



Fig. 20. The finished restoration of the pot.



the world are so much alike in their disposition of rubbish, for it is this very material, which, in modern science, is providing the present day investigator of ancient peoples with an abundance of tell-tale data. By carefully identifying the constituent parts of ancient rubbish it is possible to determine many of the implements used and some of the foods consumed by the folks who produced the rubbish heaps.

This method of procedure has been put into effect in archeological work in Wisconsin. On the west shore of Lake Winnebago just north of the city of Oshkosh is an old campsite which was occupied by the Winnebago Indians in early historic times. During the summer and autumn of 1932 parts of this campsite were excavated by Messrs. Arthur P. Kannenberg and Lewis J. Dartt. Many refuse pits or rubbish pits were encountered in the progress of the work and the materials found in them were preserved for further examination. This material was brought to the Milwaukee Public Museum where it was investigated, and although the work has not yet been completed, the results produced thus far are interesting. Aside from the artifacts which were found, the refuse consisted of great quantities of bones and mussel shells, with a few remnants of plant foods. The shells submitted for examination were identified by Mr. W. E. Dickinson of the Department of Lower Zoology, Milwaukee Public Museum. Although the shells which were examined probably do not represent all of the species which were utilized by these Indians, the identified materials included the following specimens: *Anodonta* sp., *Unio gibbosus* Barnes, *Quadrula plicata* Lesueur, *Lampsilis ventricosus* Barnes, *Lampsilis rectus* Lamarck, *Lampsilis luteolus* Lamarck, and *Lampsilis ligamentinus* Lamarck.

Among the identified animal bones are those of the Virginian deer, the common badger, and a small canine of unknown species. Several lower mandibles of the American merganser were encountered, and there were great quantities of fish scales, sturgeon bones, and the large ear bones of the fresh water sheep's-head. These are only a few of the animals which were represented in the rubbish, and as this investigation is continued many more species will be identified.

The reader may wonder why it is that we spend time to

investigate that which is obvious. The answer is that we are merely proving that which we believe to be true. We have always been taught that the Indians ate everything which was edible in their environment, and, whether it was true or false, we believed it without questioning. However, that which seems reasonable is not a fact until it has been substantiated by material proof. It would not be entirely strange if we found that the ancient Wisconsin Indians did not eat many of the foods which are considered delicacies today, for that very condition is found in many parts of the world. The use of milk as a food is an example of this. In our own culture we find milk a very healthful food, and we insist upon feeding it to children and sick folks, yet there are millions of people in the world who would no more drink the milk of animals than we would eat caterpillars and toads. Indeed, certain tribes in Africa breed cattle for social reasons but their flesh is never eaten and their milk is never consumed. Because food habits and food taboos of which we are not aware may have existed among our ancient Indians it is well for us to investigate their food problems before we state definitely what they ate and what they did not eat. Where we have written records of the early explorers, traders, and pioneers of good repute, which contain the desired information we may be spared the task of investigating the problem, but unfortunately these early travelers left much unrecorded which would be of value to us at the present time.

In view of the information which has been obtained from ancient rubbish in the past, it is logical to believe that with the development of more refined archeological technique we shall be able to increase the yield of rubbish heaps in the future. It is to be hoped that those men who are truly interested in archeological research will begin to recognize the value of these materials as libraries of information concerning the lives of no longer existing peoples, and that they will give them the sincere consideration which they deserve.

COMMITTEE REPORTS

Committees for the Wisconsin Archeological Society submitted the following annual reports at the regular monthly meeting on April 17. The Program Committee, of which Mr. Smith was chairman, did not report, it being conceded that the work of this committee spoke for itself. Miss Campbell, the new chairman, spoke for the Committee on Biography, outlining plans for the next year and asking for the full cooperation of all members of the Society towards completing the biographical records. Dr. Barrett, chairman of the Lapham Research Medal Committee, notified the meeting that the committee had taken no action during the past year. Mr. Pierron, chairman of the Membership Committee, presented an oral report summarizing the difficulties confronting the committee because of the depression.

State Archeological Survey

Milton F. Hulburt has continued his field work in Sauk County locating additional camp and village sites in that county. Of these locations he has prepared a blueprint map copies of which have been presented by him to several Wisconsin museums. Mr. Hulburt is a painstaking worker. He has also prepared a card index for keeping track of his work. Mr. Hulburt also located a village site at the mouth of Prentice creek, in Columbia county, a brief report of which appeared in a Milwaukee paper. This site is partly submerged in the Wisconsin river.

Leland R. Cooper has continued his exploration of a rock-shelter, located in the same county, with interesting results. He exhibited several earthenware vessels, potsherds and a clay death mask at a recent adult hobby show held at the Madison Y. M. C. A. The mask was obtained from a burial mound excavated by him in Barron County two summers ago.

Kermit R. Freckman has made surveys and prepared detail maps of several mound groups and camp sites located by him at Pleasant Lake in Waushara County. His work

is very well done. He intends to complete it by surveying and platting some other mounds in that region.

Walter S. Dunsmoor states that he has continued his researches in Green Lake and Marquette Counties.

In an address delivered before the Society in 1932 Theodore T. Brown presented a verbal report of field work carried on by himself and others in the Green Bay region.

Mr. White prepared a report on mounds and other Indian features on the site of Kletsch Park on the upper Milwaukee river. This was read at a director's meeting and was sent to the County Park Commission to assist them in the work of preserving and marking them.

None of the foregoing men have turned in any reports to the State archeological files except Mr. Hulburt and Mr. Brown. It is reported that some other members of the Wisconsin Archeological Society have engaged in exploration and location work in other counties but no reports of these have been filed with Secretary Brown.

Dr. Barrett has just completed a Milwaukee Museum publication on Ancient Aztalan.

Secretary Brown himself excavated two mounds at Edgewood at Madison.

Late in September, your chairman was sent by the Milwaukee Public Museum on a trip down the Rock River from Lake Koshkonong to Beloit. Thanks to the report of Mr. Ira M. Buell, Vol. 18 No. 4 of this series, and Messrs. C. E. and T. T. Brown, Vol. 9 No. 1, my work was made much easier. I visited where possible all of the camp sites as noted by them in their reports. Since then many of the spots that they mentioned have been built up into summer places and it is no longer possible to make a surface survey. The collection of D. W. North at Indian Ford was visited. He has some very interesting potsherds. Mr. W. D. Hemp-hill has a very interesting collection. We also visited his farm near Busseyville and found an Upper Mississippi camp site. A shell-tempered pottery pipe, of typical Siouan shape, is noteworthy. U. G. Miller near Edgerton has a fine pipe. George Sherman of Newville has a fine hematite plumb bob. Edward Altpeter of Fort Atkinson, G. M. Hausz of Fort Atkinson, Geo. Goldthorpe of Busseyville and Mr. Lawton of Fort Atkinson have interesting specimens.

A very fine Upper Mississippi camp site on the west end of Lake Koshkonong yielded in two trips a great many characteristic artifacts. The Catfish River Camp Site did not yield one sherd of shell-tempered ware.

TOWNE L. MILLER, *Chairman.*

Mound Preservation

Through the acquirement by the University of Wisconsin of Lake Forest, a tract of woodland located on the south shore of Lake Wingra, at Madison, another fine local group of prehistoric Indian mounds has been permanently preserved. This property is to be employed as an arboretum and wild life preserve and is placed in charge of a committee of University of Wisconsin men and citizens appointed by President Glenn Frank. Only about one half, the western half of this fine woodland, is now University property. A description of it and of the mounds located there is included in Charles E. Brown's report on Lake Wingra, published in this series, Vol. 14, No. 3, 1915. The mounds now preserved are to be restored and later marked with a tablet. It is hoped to acquire later perhaps a portion of the eastern half of Lake Forest and to thus preserve other mounds and natural beauties.

Through the recent gift to the State of Wisconsin of a largely wooded tract of land located on the bank of the Mississippi River, just north of Fountain City, a small group of three round and oval Indian mounds has been preserved. These have been dug into by relic hunters. A request for their future restoration and marking with a tablet has been made. This newest state park has been named in honor of the late Mr. George Byron Merrick, of Madison, noted upper Mississippi River historian, and a former member of the Society and of the State Historical Society.

A group of Indian mounds located near Kingsley Bend, a few miles south of Wisconsin Dells, has been converted into an archeological park ("Indian Mound Park") by its owner. The land has been cleared of brush, neatly fenced and some small buildings erected. Tourists are permitted to see this park and its mounds for a small charge. The present owner of the park is quite enthusiastic about the

mounds and will restore and protect them. These mounds are of round, linear and effigy forms.

Several Indian mounds and other features have also been preserved in Alvin C. Kletch county park on the bank of the Milwaukee River just north of Milwaukee. Secretary Brown has requested their marking and preservation.

MATTIE C. DEVINE, *Chairman.*

State Archeological Parks

The only activity of the above named committee, during the past year, was on the part of one of its members, Robert P. Ferry, of Lake Mills, Wisconsin.

Mr. Ferry reported that the Aztalan Park sign had been removed by the Highway Commissioner. Mr. Ferry investigated the matter and had the sign replaced.

Mr. Ferry also reported that the glass on the top of the table was broken and the inclosures removed. He had the glass repaired and exhibited other inclosures obtained from the Milwaukee Public Museum.

GEO. A. WEST, *Chairman.*

Fraudulent Artifacts

Your committee has been of service to the Society as follows:

It has stopped a two-page write-up in Hobbies magazine on H. S. Johnson of Clarksville, Tennessee. All that appeared in the November issue of this magazine was a picture of a houseboat with four or five lines stating that Johnson and his father would travel up and down the Tennessee River exhibiting and collecting Indian relics. We heard of this contemplated story too late to stop it entirely.

We have examined and pronounced a fake a large copper ax, ten inches long, which was sold to N. E. Carter of Elkhorn by F. E. Ellis of 30 Elm Place, Webster Grove, Missouri. We have traced the manufacture of this ax to the vicinity of Fond du Lac, but have been unsuccessful in pinning it on to any one man, as everybody concerned was most unwilling to give information; all we got was a lot of promises and lies to shield the maker. This ax is now in

the possession of B. Knoblock, 325 S. Edgwood Ave., La Grange, Illinois, to whom F. E. Ellis evidently sold it after N. E. Carter made him take it back. This ax is very cleverly made and will deceive the average collector.

We have also condemned a copper rat-tailed spear supposed to have come from Black River Falls, Wisconsin. This spear and a stone ax were sold to Mr. Miller, a second-hand dealer on Wells Street, Milwaukee, who has them displayed in his window.

We have been of service to a member of the Society living in Lake Mills to whom a ceremonial ax, which proved to be a fake, was offered.

I received four copper spears from H. S. Shesmia, of Black River Falls, Wisconsin, who said he bought them from a man at Sparta, Wisconsin, but did not remember his name which he would try to secure for me. However, repeated letters have failed to freshen his memory or to bring to me the man's name. All four of these coppers were rank fakes. To tell the truth, I strongly suspect this man himself, who may possibly be trying out his fakes to see how good they are.

JOS. RINGEISEN, JR., *Chairman.*

Marking Milwaukee Archeological Sites

As Chairman of your Committee on marking Milwaukee Archeological sites, it becomes my duty to submit a report at this time. This Committee consists of Dr. Paul B. Jenkins, L. R. Whitney and me. As I am in Milwaukee only upon working days and being very busy during working hours, I know almost nothing about the unmarked mounds and other archeological sites in and around Milwaukee. Neither am I familiar with the streets. Furthermore, the financial situation has been such as to discourage the solicitation of funds for anything not absolutely needed for helping those less fortunate than us.

I did try to get the Committee together and confer as to what we could do under the circumstances. This effort proved to be a dud. And so I can only report as did the Biblical servant, "Lord, I knew thee that thou art an hard man, reaping where thou didst not sow and gathering where

thou didst not scatter, and I was afraid and went and hid thy talent in the earth; lo, thou hast thine own." Since then times have changed. Too often, in recent years, the bankers have kept, or spent as their own, all moneys left with them. We feel that the master's reply to us should be, not a rebuke, but praise. He should say, "Well done, good and faithful servants, Through your efforts I still have mine own, and I can give the bankers the Merry Ha Ha."

All of which is respectfully submitted.

WINFIELD W. GILMAN, *Chairman.*

Publication

The regular four quarterly numbers were published during the past year, including 177 pages of printed matter, twenty-five articles, submitted by twenty-two different authors, were published. The committee's sincere thanks is extended to those who have contributed, and all members of the Society are urged to support their paper with contributions during the coming year. Good material has been promised, but we need more, and need it now. Short articles on specialized subjects are welcome. Manuscript in long-hand is just as acceptable as in typewritten form.

Although involving a material cut in the cost of publication, the financing of the Archeologist is assured in spite of the withdrawal of state support. Its future success, however, depends not primarily upon the efforts of this committee, but upon the full cooperation and support of the Society, which means the support of its individual members.

IRA EDWARDS, *Chairman.*

(Submitted by H. W. Kuhm)

ARCHEOLOGICAL NOTES

Meetings

A meeting of the Society was held in the auditorium of the Milwaukee Public Museum on Monday evening, February 20, 1933. About 400 members and local friends had assembled in this large hall to listen to an address by Prof. Fay Cooper Cole of the University of Chicago on the engrossing subject of "The Century of Progress Exposition". President McKern introduced the speaker who is well known to local audiences, being also an honorary member of the Wisconsin society.

Professor Cole told of the organization of the Chicago exposition, of the manner of its financing, of its spacious grounds on the Lake Michigan shore, of the unique character of its great buildings, the beauty of its statuary and landscaping, and of the splendid and extensive exhibits of every kind which were being installed. As of special interest to his audience, he spoke particularly of the archeological, ethnological and historical exhibits, both outdoor and indoor, which were to form a prominent feature of this exposition. Indian mounds of various classes were being reproduced, also an ancient Maya temple and other Indian structures. There were to be replicas also of mounds excavated in Illinois. A group of Wisconsin Chippewa Indians was to be among others encamped on the grounds. A reproduction of the early American military post at Chicago, Fort Dearborn, has been much featured in newspaper accounts of the exposition. Dr. Cole illustrated his address with a fine collection of lantern slides.

At the meeting of the Executive Board, held at the LaSalle Hotel, in the early part of the evening, Messrs. McKern and Brown presented verbal reports of their appearance before the Joint Finance Committee of the state legislature in behalf of the Society's annual state appropriation. Secretary Brown reported on the recent death of Mr. L. J. Pettitt of Milwaukee, a life member of the Society. Mr. Charles B. Perry, Milwaukee, was elected to annual membership. A report on the present membership was also made.

The annual meeting of the Wisconsin Archeological Society was held in the Trustees Room of the Milwaukee Public Museum, on Monday evening, March 20, 1933. Forty members and a few visitors were in attendance.

President W. C. McKern conducted the proceedings. Secretary Brown announced the deaths of Huron H. Smith, a member of the Advisory Council, of Alfred L. Korth, a member, and of General Charles King, U. S. A., an honorary member. The loss of these friends was greatly regretted. Announcement was also made of the annual meeting of the Central Section American Anthropological Association at the University of Chicago, on April 7 and 8, and of the annual joint meeting of the Society with the Wisconsin Academy of Sciences, Arts and Letters and the Midwest Museums Conference to be held at the State Historical Museum and the University of Wisconsin, at Madison, on the same dates. Members were urged to attend and to present papers at one or the other of these meetings. It was unfortunate that they fell on exactly the same dates.

Charles G. Schoewe made a motion that the president appoint a nominating committee to nominate officers for the ensuing year. Seconded by Joseph Ringeisen, Jr., and carried. The president appointed as a nominating committee the Messrs. H. W. Kuhm, C. G. Schoewe and W. W. Gilman. These members retired, and returning, presented the following nominations:

President—
W. C. McKern

Vice-Presidents—
W. W. Gilman
A. L. Kastner
R. J. Kieckhefer
H. W. Kuhm
E. F. Richter

Directors—
G. A. West
C. G. Schoewe

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J. G. Gregory
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Mrs. Theo. Koerner
G. R. Zilisch
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E. J. W. Notz
Marie Kohler
Arthur Gerth
Paul Joers
F. S. Dayton
Louise P. Kellogg
Louis Pierron
L. S. Buttles
T. T. Brown
Ralph Linton
A. T. Newman
S. A. Barrett
Orrin Thompson
Marshall Cousins

No other nominations were offered and these officers were elected. President-elect McKern thanked the members for their cooperation during the past year. He felt it an honor to be thus elected for a second term. The annual reports of Secretary Brown and of Treasurer Thorne were read and approved. The Messrs. G. A. West and E. F. Richter were appointed to audit the treasurer's report.

Mr. Murl Deusing, Assistant Lecturer at the Milwaukee Museum, presented an illustrated lecture on "The Trail of Marquette and Joliet." This was a very interesting account of a canoe trip made by himself and an associate over the Wisconsin waterways (the Fox and Wisconsin rivers) followed by these discoverers of the Mississippi river, in the year 1763. Mr. C. G. Schoewe exhibited the beadwork ribbons from a Potawatomi girls' hair-wrap.

The annual Joint Meeting of the Wisconsin Archeological Society with the Wisconsin Academy of Sciences, Arts and Letters and the Midwest Museums Conference was held at Madison, on Friday and Saturday, April 7 and 8. The meetings of Section A (anthropology, history, sociology, etc.) were held in the auditorium of the State Historical Museum on Friday, April 7. Secretary Charles E. Brown presided over the meetings of this section. Ten of the twenty-three papers presented were on archeological subjects, nine of these being by members of the Society. These members were Kermit Freckman, Theodore T. Brown, John J. Knudsen, E. Ralph Guentzel, Will F. Bauchle, Charles E. Brown, Dr. Lindley V. Sprague, George Overton and Leland R. Cooper. Marguerite F. Stiles of Madison also presented an archeological paper. Duane H. Kipp, Albert O. Barton, Dr. Joseph Schafer, Dr. Louise P. Kellogg, Vivian Morgan, Dr. F. W. Harris, Herman Kerst, Donald O. Newton, Harold A. Engel, Alice I. Vinje and Charles L. Emerson presented papers on historical, folklore and museum subjects. The papers were all of excellent quality and very interesting. Some have been promised for publication in *The Wisconsin Archeologist*. The meetings were quite well attended.

On Saturday morning a meeting of the Midwest Museums Conference was held in the Historical Museum, Gilbert O. Raasch presiding. At this meeting business connected with the work of the conference and the extension of its membership was discussed. It was suggested that a meeting be held at Madison in the autumn of the year.

On the 7th and 8th of April, 1933, the Central Section of the American Anthropological Association met in Judson Court, a newly completed dormitory of the University of Chicago. Dr. Melville J. Herskovits of Northwestern University presided over the meetings.

Three papers were presented which may be of interest to members of the Wisconsin Archeological Society. The first was by Dr. Charles R. Keyes, State archeologist of Iowa, entitled "Archeology of the Upper Iowa Valley". Dr. Keyes described the Oneota culture which is found in Iowa and which is closely related to the upper Mississippi culture of Wisconsin.

Dr. Earl H. Bell of the University of Nebraska, and formerly of the University of Wisconsin, presented an extremely interesting and critical paper on "An Evaluation of Recent Nebraska Finds Attributed to the Pleistocene". Dr. Bell stated that although the artifacts recently found in association with Pleistocene remains in Nebraska may be of Pleistocene age, the data available at the present time do not definitely prove them to be so.

Alton K. Fisher of the Milwaukee Public Museum, and a member of the Wisconsin Archeological Society, gave an illustrated talk on the status of "Human Paleopathology in Wisconsin". The slides which were used in the talk illustrated a number of the pathological lesions which have been observed in the skeletal material recovered in archeological work in Wisconsin during the past few years.

At the business session of the meeting Mr. W. C. McKern of the Milwaukee Public Museum, president of the Wisconsin Archeological Society, was elected president of the Central Section of the American Anthropological Association. George R. Fox, who has been a member of the Wisconsin Archeological Society for many years, was re-elected to the office of Secretary-Treasurer.

Research

Milton F. Hulburt of Reedsburg, a member of the Society, has prepared a new map of the Indian sites located by himself and other archeologists in Sauk County. Every year Mr. Hulburt continues to locate, investigate and map additional camp, workshop, village and other sites in his home county. If the legislators of the state could only know and appreciate how many more Wisconsin men like Mr. Hulburt are devoting and have devoted their own time and money to such important work for the benefit of its future citizens, it would be perhaps less difficult to secure small annual appropriations.

E. Ralph Guentzel, a University senior, is engaged in a study of Wisconsin Indian earthenware vessels. It is interesting to note how greatly the number of such vessels, of all sizes and kinds, has increased through excavations and restorations since Publius V. Lawson of Menasha, a charter member of the Wisconsin Archeological Society, published his small list of such vessels in Wisconsin collections in *The Wisconsin Archeologist*, in the year 1902.

Mr. John H. Knudsen, a Madison member of the Wisconsin Archeological Society, has designed for his own convenience as a collector and student of Wisconsin archeological history a convenient system for the filing of his smaller flint implements—arrowpoints, spearpoints, perforators, scrapers, knives, etc. The implements collected from particular sites are neatly mounted on squares of cardboard. These specimens are numbered and catalogued. The cardboard squares are inserted in stout special manila envelopes. On the surfaces of these envelopes are pen and ink drawings of the specimens on the card within. These also bear numbers and data concerning the site from which they were collected. These envelopes are filed in

drawers from which they can be drawn for reference or study at any time. Mr. Knudsen is an artist as well as an interested archeologist.

Publications

A profusely illustrated account of the customs and ways of living of a tribe of central California Indians is given in: *Miwok Material Culture*, by S. A. Barrett and E. W. Gifford, a recent bulletin of the Milwaukee Public Museum, Vol. 2, No. 4, 1933. This publication is the result of years of extensive investigations and studies by the two authors. Price \$3.00.

Mr. Albert M. Fuller, Botanist of the Milwaukee Public Museum, is the author of an exhaustive treatment of Wisconsin orchids: *Studies on the Flora of Wisconsin, Part I*, M. P. M. Bulletin, Vol. 14, No. 1, 1933. The work is beautifully illustrated with photographs by Geo. L. Waite and many technical drawings. Price \$4.00.

A complete detailed report on Ancient Aztalan, by S. A. Barrett, is just off the press. This Milwaukee Public Museum Bulletin, comprising an entire volume (Vol. 13), has 602 pages, 100 plates, 161 figures and 2 maps. It is based upon extensive excavations conducted during three field seasons and subsequent years of study. Price \$7.00.

Religious beliefs and customs among certain Indian tribes of California are discussed by E. M. Loeb in his paper: *The Eastern Kuksu Cult*, Univ. of Calif. publ. in Amer. Archeol. and Ethnol., Vol. 33, No. 2, 1933.

The March issue of *The Masterkey*, periodical of the Southwest Museum, Los Angeles, Calif., contains articles on: Archeology in the Making; Blackfoot Legends; other subjects of archeological interest.

The January number of the *American Anthropologist*, Vol. 35, No. 1, contains among others the following articles: *The Antiquity of Man in Southwestern Asia*, by Henry Field; *A Peruvian Multicolored Patchwork*, by Lila M. O'Neale; *The Blue-Jay Dance*, by Harry Turney-High; *Aboriginal Burials in Southwestern Oregon*, by L. S. Cressman; *Tobacco Chewing on the Northwest Coast*, by Roland B. Dixon.

Information on the discovery of stone projectile points associated with the bones of prehistoric animals of the Pleistocene period in Nebraska is contained in four recent bulletins of the Nebraska State Museum, as follows: (1) *Association of an Arrow Point with Bison Occidentalis in Nebraska*, by F. G. Meserve and E. H. Barbour, Bull. 27; (2) *The Mounted Skeleton of Bison Occidentalis and Associated Dart-points*, by E. H. Barbour and C. B. Schultz, Bull. 32; (3) *Association of Artifacts and Extinct Mammals in Nebraska*, by C. B. Schultz, Bull. 33; (4) *The Scottsbluff Bison Quarry and its Artifacts*, by E. H. Barbour and C. B. Schultz, Bull. 34.

An account of recent archeological investigations in Indiana, by Glenn A. Black, is given in: *The Archeology of Green County*, Indiana Historical Bulletin, Vol. 10, No. 5, Indianapolis, 1933.

A new Wisconsin tourist guide book is being prepared for publication by Charles L. Emerson of Madison. In this new travel book the scenic, historic and curious landmarks of the state are conveniently placed along certain well selected travel routes or trails. The archeological monuments and sites of Wisconsin are featured.

The Illinois Chamber of Commerce, with an office at Chicago, has an "Illinois Tourist Guide", printed in 1932. This well-illustrated book describes some of the archeological features of the state. Among these are the old Indian village site and cemetery at Horseshoe Lake, the mound at Shawneetown, the Cahokia mounds, the Dickson mound at Lewistown, the Black Hawk village at Rock Island, Starved Rock, and the fine mounds at Quincy. Persons touring in Illinois should obtain a copy of this guide.

Obituary

On Saturday, March 18, there died at Milwaukee, General Charles King, Wisconsin's premier soldier, a fighter in five American wars. He was 88 years of age. "He was appointed to West Point at 17 on the order of President Abraham Lincoln. His military career began during the Civil War when his father, Brig. Gen. Rufus King, a pioneer Milwaukee journalist, was stationed at Washington. As a young lieutenant he took part in the western Indian campaigns. Wounds caused his temporary retirement from active service in 1874. At the outbreak of the Spanish-American war he returned to war service, leading a Wisconsin brigade in the Philippine Islands. When the World War came he helped to train Wisconsin units. After this war he was awarded the Victory medal." In past years General King was an occasional speaker at meetings of the Wisconsin Archeological Society. Quite a few of its members had served under this fine soldier in the Wisconsin National Guard. He was an honorary member of the Society.

Miscellaneous

During the past year only a very small number of additional Wisconsin Indian mounds have been preserved in state and municipal parks and on other public lands in the state. None have been marked with descriptive tablets. There are still in existence in different parts of the state many notable single mounds and groups of mounds which should be acquired, protected and marked. The Wisconsin Archeological Society requests all interested Wisconsin societies and other organizations to aid in this very important work during the year 1933.

The museums of the state are not suffering from a lack of patronage and public use during these depression years—the number of their visitors has very considerably increased. Most are handicapped, however, in their educational work by curtailment of their purchasing and other funds. Despite the character of the times a few new historical and other museums are being organized.

At a meeting of the University Folklore Society held at Madison at the Memorial Union building, on March 7, Charles E. Brown spoke on "The Pioneer and the Bear", presenting a series of selected Wisconsin stories of the black bear once so common in the state. He called attention to the numerous bear effigy mounds as evidence of the reverence in which this animal was held by the prehistoric Indian inhabitants of Wisconsin. Mr. Brown has just published for the Society a booklet, "Old Stormalong Yarns", being a collection of stories and legends of the Yankee sailors of the old time wind-driven ships of America.

The "On Wisconsin" series of broadcasts of the WHA radio station of the University of Wisconsin, given during the past five months, have been received with more than state-wide interest. In these weekly programs selected groups of speakers gave talks on the geology, zoology, history, anthropology and folklore of the state. The

director was Ralph A. Engel of the station staff. These programs are being continued.

The earliest attempt to prepare a monograph of the native copper implements and ornaments of Wisconsin was that published by Charles E. Brown, secretary of the Society in *The Wisconsin Archeologist* in 1904. Those issues are now, twenty-nine years later, out of print and rare. At that time the largest collections of such implements in the state were those of Henry P. Hamilton at Two Rivers, William H. Ellsworth at Milwaukee, Frederick S. Perkins at Burlington, William H. Elkey at Milwaukee, Rudolph Kuehne at Sheboygan, J. P. Schumacher at Green Bay, the collections of the Milwaukee Public Museum, of the Wisconsin Historical Museum and a few others. But few copper implements had then been recovered from mounds excavated. The range of country in which such artifacts had been collected did not then extend very far north of the center of the state, comparatively few had been found west of the Wisconsin river. In the years since 1904 the range of these artifacts has been extended as far north as the shores of Lake Superior and the Wisconsin-Michigan boundary and westward to the Mississippi banks, and in considerable numbers. Through the years Mr. Brown has kept records of these obtained from village sites, mounds, burial places and other Indian locations. Twenty years ago Mr. Publius V. Lawson estimated that about thirty thousand copper implements had been collected. Mr. West has recently published a monograph on Wisconsin copper implements which brings the information concerning them quite up to date.

In the State of Minnesota preparations for the organization of a future state archeological society are under way. Several meetings of collectors and others interested in archeological research have already been held and will be continued through the spring months. George A. Flaskerd, a former member of the Wisconsin Society, is among those keenly interested.

The Wisconsin Archeologist

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July, 1933
NEW SERIES

No. 4



PUBLISHED QUARTERLY BY THE
WISCONSIN ARCHEOLOGICAL SOCIETY
MILWAUKEE

Accepted for mailing at special rate of postage provided for in Sec. 1103
Act, Oct. 3, 1917. Authorized Jan. 28, 1921.

WISCONSIN ARCHEOLOGICAL SOCIETY

The Society is a state department, receiving a part of its support from the state. Its funds are under state control. Its work is well and widely known. It has received the approval of leading American archeologists, who agree that it deserves the full support of all Wisconsin citizens interested in the state's archeological history.

The Society's activities comprise the location, recording, investigating and preservation of Wisconsin Indian remains, folklore and history, all of which are rapidly disappearing and must be recorded and saved immediately if ever.

Through its efforts many fine groups of Indian earthworks and other aboriginal monuments and remains have been permanently preserved to the public. Most have been marked with descriptive metal tablets. Others are being protected. Surveys and explorations have been conducted in many sections of the state.

It is also engaged in encouraging the establishment of public museums and collections and in discouraging the manufacture and sale of fraudulent antiquities.

Regular monthly meetings of the Society are held during the months September to May, inclusive, in the Trustees Room of the Milwaukee Public Museum. Meetings are open to the public. No regular meetings are held during the months June to August, inclusive. Special field meetings are occasionally held during the vacation months.

The results of its research and other activities are made known through its regular quarterly publication, *The Wisconsin Archeologist*. Thirty volumes have appeared. The Society has a large membership distributed through every part of the state.

It is co-operating to the fullest extent with all of the various scientific and educational organizations and institutions of Wisconsin.

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MILWAUKEE

Wisconsin Archeological Society

Milwaukee, Wisconsin

Incorporated March 23, 1903, for the purpose of advancing the study
and preservation of Wisconsin antiquities

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Annual Members, \$2.00

Institutional Members, \$1.50

Junior Members, \$.50

All communications in regard to the Wisconsin Archeological Society should be addressed to Charles E. Brown, Secretary and Curator, Office, State Historical Museum, Madison, Wisconsin. Contributions to the Wisconsin Archeologist should be addressed to Dr. Ira Edwards, Editor, Public Museum, Milwaukee, Wisconsin or to the Secretary. Dues should be sent to G. M. Thorne, Treasurer, National Bank of Commerce, Milwaukee, Wisconsin.

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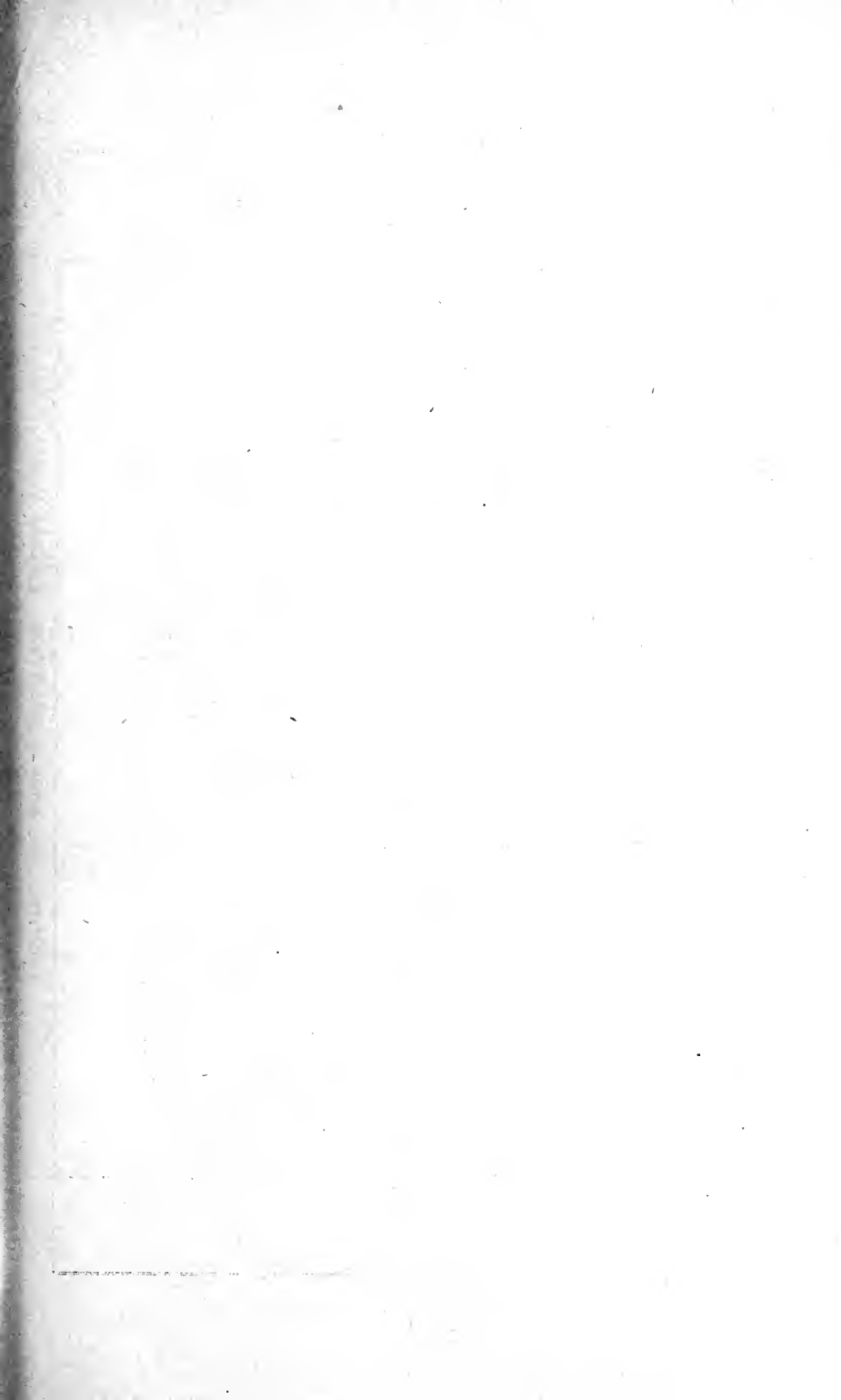
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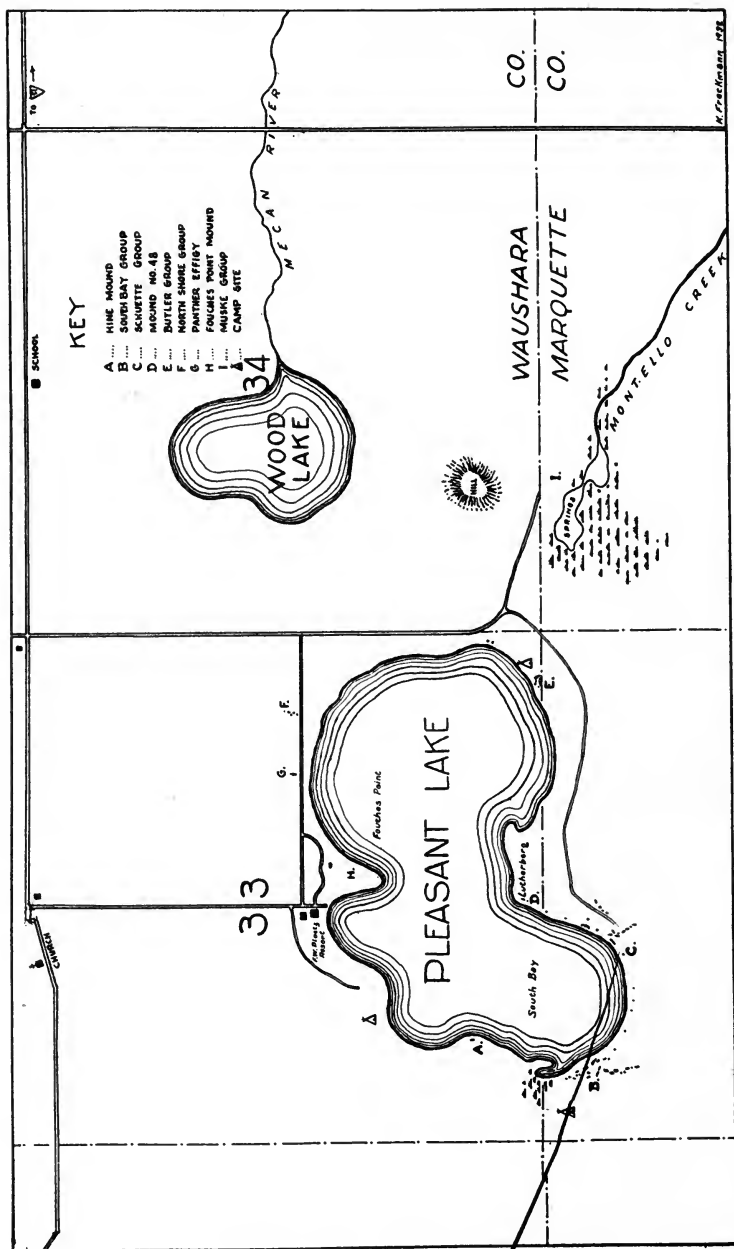
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ARCHEOLOGIC MAP OF SEC. 33 & 34, COLOMA, WIS.

The Wisconsin Archeologist

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MADISON, WIS., JULY, 1933
New Series

NO. 4

MOUNDS ON PLEASANT LAKE

Kermit Freckmann

Pleasant Lake, located in the S $\frac{1}{2}$ of Sec. 33, Coloma township, Waushara County, Wisconsin, is one of the most beautiful small lakes of the county. Its clear crystal waters, sandy beaches, and high wooded shores made this lake an ideal location for aboriginal habitation.

The lake is somewhat crescent shaped and its greatest axis is a little less than one mile long, which has a north-east by southwest trend. The northeast end is the largest portion of the lake and is slightly divided from the southwest body of water, or smaller portion, by two projections of land extending for a certain distance out into the lake. These two projections are designated as Fouches point from the north and Lutherburg from the south. The southwest or smaller portion of Pleasant Lake is referred to in this report as South Bay. The northwest shoreline of the lake forms two more small bays (Frontispiece). While there is no inlet or outlet to the lake, there are several small springs along the shores. Of these springs two seep through the hillside on the west shore and find their way down into the lake.

Pleasant Lake was, perhaps, for the aborigines, a choice retreat from the great Fox-Wisconsin riverway, considering the number of earthworks found along the wooded shores of this beautiful lake. This retreat was made possible by the existence of a navigable stream which has its source about 80 rods to the southeast of Pleasant Lake and its mouth at the Fox River. This stream is known as Bachelor's Creek. It can readily be seen that the early Indian, traveling in his canoe up the creek from the Fox River, could, by a short portage from the source of this creek, reach his habitation at Pleasant Lake which was in utter

seclusion from the great river highway where all kinds of tribes traveled. It is this fact together with the other natural resources that made Pleasant Lake an outstanding and most desirable location for aboriginal habitation. How could we otherwise account for the great wealth of evidence indicating that large numbers of Indians once resided here, when in the surrounding vicinity, such as at Wood Lake, there is little or no evidence of lengthy occupation by any Indians?

CAMP SITES

HINE CAMP SITE. On the west shore of Pleasant Lake, N $\frac{1}{2}$, SW $\frac{1}{4}$ of Sec. 33, were found some evidence of aboriginal occupation. There were numerous chips and flakes of light brown quartz scattered over the wind-blown sand. This site does not appear very extensive and seems to be confined to a short area along the top of a ridge which borders the north shore of the small west bay of Pleasant Lake (Frontispiece). To the south of this site is a wooded ravine which extends far back from the lake. To the north is a large sand field that is sometimes cultivated, and to the west is the farm home of Mr. William Hine, who is also the owner of the camp site. He has found some flint points here in past years during which this site was under cultivation. At the present time, however, the evidences are brought to light only by the constant shifting of the sand, and by other causes due to the elements. The writer has in his collection a broken but beautifully worked knife, fashioned from red chert, and also several other chert arrow-points taken from this site.

SOUTH BAY CAMP SITE. Near the southwest corner of the south bay, a short distance back from the lake, are numerous evidences of an early camp or village site. This area extends over into Marquette county, NW $\frac{1}{4}$, NW $\frac{1}{4}$ of Sec. 4, Springfield twp. The site occupies a rectangular plot of ground which has been, until recently, a cultivated field. It is, perhaps, no larger than 250 yards in length and approximately 150 yards wide. To the north is a small marshy area that just borders on a portion of the south bay. To the west is a wooded ravine, while on the east the site is

bounded by an oak forest that contains the South Bay Group of Mounds. South of this camp site are extensive fields which are under cultivation. Most of the aboriginal material was found in the north end of this rectangular sand field, that is, in the part nearest the lake shore. It is also in this section where can be plainly seen the outlines of two circular refuse pits, from which numerous bone chips lie scattered over the sandy surface. I was able to obtain two flint drills and a few broken arrowpoints from these pits; however, these refuse pits contain mostly broken animal bones and flint flakes or chips. This field is in very much the same condition as the Hine site, for the evidences of aboriginal occupation are brought to the surface only by the constant shifting of the sand. I have found many arrowheads and other implements here, but my best specimen from this site is a beautifully fashioned spear point made of light brown quartz and is $3\frac{3}{8}$ inches long. Very probably the wooded section immediately adjoining this barren field may contain evidence that this site is more extensive than is revealed at the present time.

On the east shore of the larger section of the lake, SE $\frac{1}{4}$, SE $\frac{1}{4}$ of Sec. 33, there are indications of another probable camp site. This section includes mounds 56 and 57. There is a slight wash in the land leading down to the lake shore and revealing numerous flint flakes and chips, and I was able to find two broken arrow points here.

INDIAN MOUNDS

HINE MOUND. On a high wooded point, NE $\frac{1}{4}$, SW $\frac{1}{4}$, SW $\frac{1}{4}$ of Sec. 33, overlooking the west and south bays of Pleasant Lake, is a linear mound, the only mound on this shore of the lake. It has perhaps the most beautiful location since it is probably the highest point on the shoreline. From this mound can be seen almost the entire lake. The trend of the mound is N.8° W. and it is 57 feet long, the north end being 17 feet wide, and the south end 15 $\frac{1}{2}$ feet wide. The southern extremity of the mound is slightly higher than at the north; the height being 32 inches. There are several small oak trees growing on the mound, which is

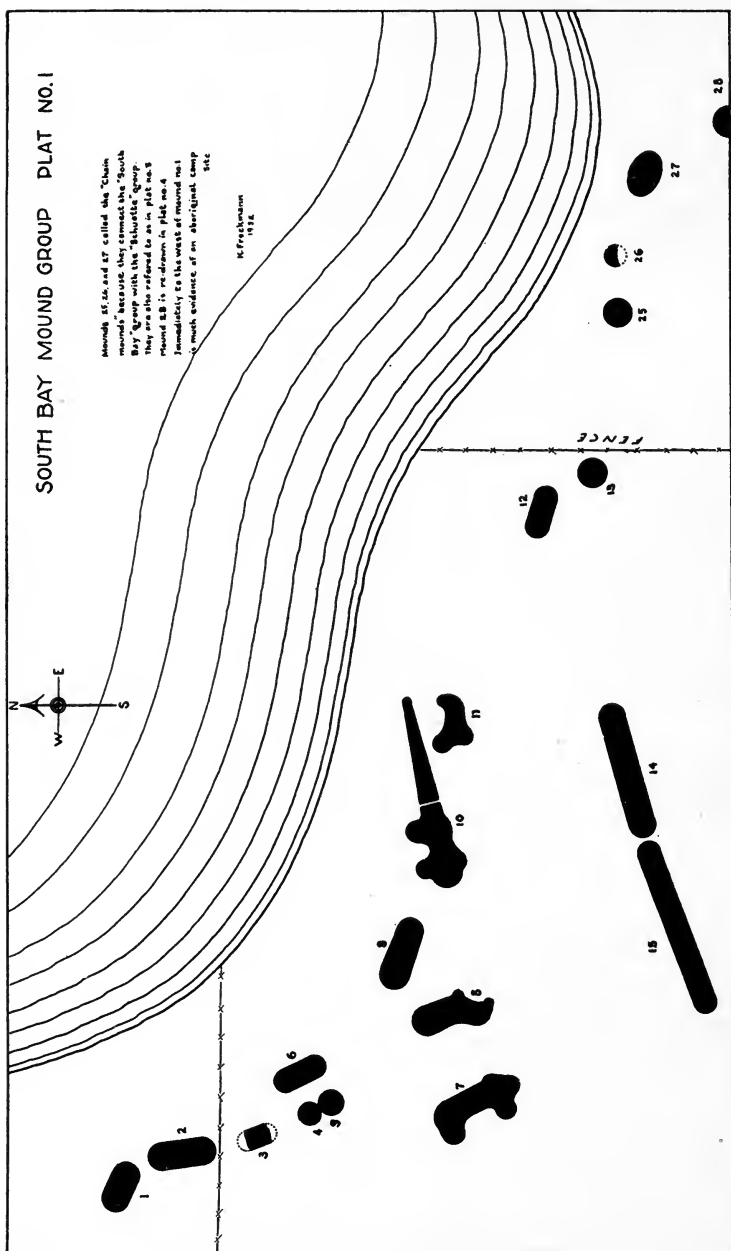


Fig. 21.

in a perfect state of preservation, but there is a possibility of its destruction in the near future because it occupies a desirable location for a summer cottage.

The Hine Camp Site lies north of this mound on the opposite side of a wooded ravine that separates them. The land is owned entirely by Wm. Hine, a farmer, who resides nearby. This section of the west shore is across the south

SOUTH BAY MOUND GROUP (Figures 21 and 22). Along the south shore of the south bay of Pleasant Lake is the best preserved and most interesting group of Indian mounds on the lake. These tumuli lie east of the South Bay Camp Site and are wholly in Marquette county, $N1\frac{1}{2}$, $NW\frac{1}{4}$ of Sec 4, Springfield twp. This group of mounds is closely associated with the Schuette Group, the two being connected by four mounds known as the Chain mounds. These Chain mounds are illustrated together with the South Bay Group but will be referred to separately. Of the South Bay Group, five are conical mounds, one is oval shaped, eleven are linear (of which one is crescent shape), and seven are effigies (of which there are six "bear" mounds, and one panther effigy)—a total of twenty-four mounds. The land upon which these mounds rest is high and dry, approximately thirty to forty feet above the lake level. This is also a wooded pastureland quite densely covered with oak trees. Mounds number 3 to 13, with the exception of number 7, are located in a clearing near the lake shore, the remaining mounds being in the woods.

Detailed Description of Mounds

LINEAR MOUND No. 1

This mound is 16 x 37 feet and is $2\frac{1}{2}$ feet high. Its trend is W. 26° N. It is located at the northeast corner of the South Bay Camp Site and is in a densely wooded ridge that borders the small swampy area on its southern extremity. This mound is in good state of preservation.

LINEAR MOUND No. 2

This is located south of No. 1, and is slightly larger in size, being 18 x 42 feet, and has a trend of N. 10° W. It is

approximately 3 feet high and is also in good condition. It is partly covered with oak trees and a great deal of underbrush.

LINEAR MOUND No. 3

What is left of this mound is now only 14 feet wide and 20 feet long. It seems that both ends have been washed

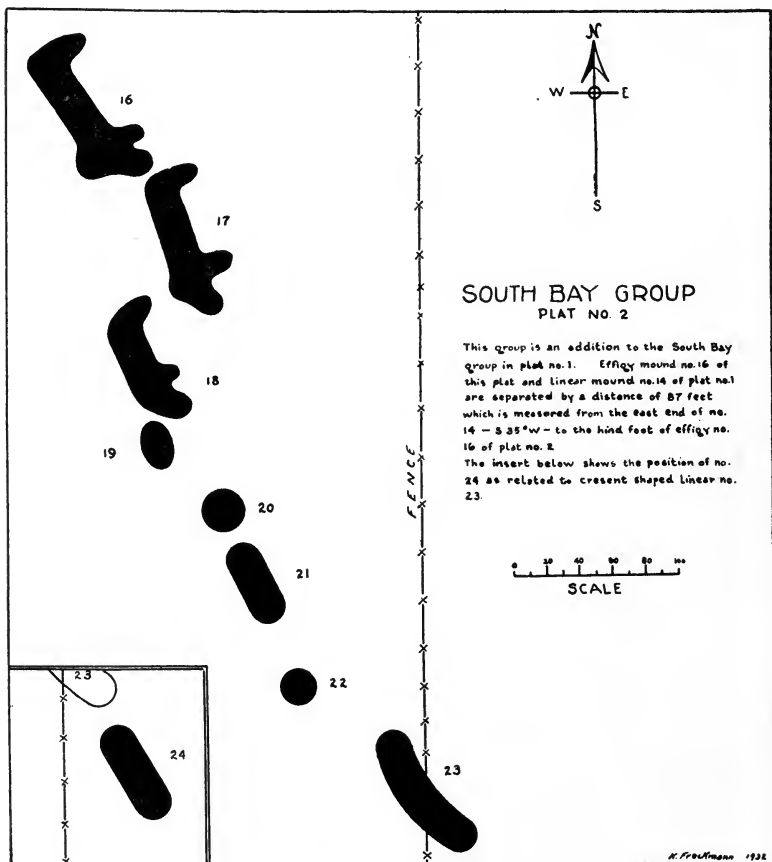


Fig. 22.

away due to the erosion of the land which consists of sand to a sandy loam. The remains of this mound are a little over one foot high, and are on the edge of a clearing south of mounds 1 and 2.

CONICAL MOUNDS NOS. 4 AND 5

These two circular mounds could be termed as bi-conical, for their outlines blend together at one point. Mound No. 4 is eleven feet in diameter and is twenty inches high at the center, while mound No. 5 is fourteen feet in diameter and is two feet in height. Both are situated in the clearing overlooking the south bay of the lake. They are in a good state of preservation.

LINEAR MOUND NO. 6

This mound is just at the crest or edge of high land which slopes down to the lake shore. Its dimensions are 16 x 45 feet and it is 21½ feet high. Its axis is N. 25° W. About one-third of its length from the north edge of the mound, there is a shallow depression, evidently the trace of some earlier digging. This mound lies east of the two conical mounds 4 and 5.

BEAR EFFIGY MOUND NO. 7

This mound lies in a wooded area directly south of mounds 4, 5 and 6. It is covered with a great deal of leaves, brush and dead branches but is otherwise in good condition—no diggings to mar its surface. The trend of the mound is N. 28° W. The length overall is 60 feet, while the width from shoulder to foot is 25 feet. At no place does it attain a height greater than 2 feet.

BEAR EFFIGY MOUND NO. 8

A short distance east of effigy mound No. 7 is another interesting type of a "bear" mound. It is interesting because it differs greatly in outline from mound No. 7, although both are closely associated. It is situated in the clearing near the edge of a woods. It is fifty-four feet over all and its width from shoulder to foot is seventeen feet. The head of this mound is enormous in comparison with its body. The legs, on the other hand, are extremely small. The entire mound is an odd structure to be sure, and it is in a good state of preservation.

LINEAR MOUND NO. 9

This mound lies northeast of the preceding effigy mound No. 8, and its dimensions are sixteen feet wide, fifty-three

feet long and two feet high. There is a shallow depression near its western extremity due to the up-rooting and the falling of a large oak tree that was approximately two and one-half feet in diameter. I would judge this tree to have been about 175-200 years old. This linear mound occupies a plot of ground immediately on the edge of the high land that, from this point, slopes at about a 45 degree angle down to the lake shore. It is also in the clearing and is in a good state of preservation. It may be said here that all the mounds mentioned so far occupy ground that is very suitable for cottages or summer homes. Thus, the future security of the mounds is not very well assured.

PANTHER EFFIGY MOUND No. 10

This is a fine specimen of a "panther" or "water spirit" mound. The length from the head to the end of the tail is one hundred and forty-eight feet. The greatest width of the mound is thirty-three feet, which is measured from the shoulder to the bottom of the fore-leg. The body trend is fifteen degrees south of west. I have formerly erroneously reported this mound as a "turtle" effigy and the mistake was due to the result of some very early excavation that someone had performed at the shoulder of this mound. The excavated dirt had been left to remain in such a position as to give a casual observer the impression that this heap of earth was another appendage of the mound. On the tail of this effigy is a stump of a large oak tree which has annular rings that indicate the mound was erected sometime before the year 1700, as there are 225 annular rings and the tree was probably cut in 1925. This mound is three feet ten inches high near the shoulder and is slightly lower near the hip. From this point the tail gradually tapers down to a few inches in height. There is a small washout of sand through the tail. This mound is in a position very similar to that of mound No. 9, except that the legs and tail of the mound lie on the slope of land leading down to the lake shore.

BEAR (?) EFFIGY MOUND No. 11

This peculiarly shaped mound lies just off the tail of the preceding "panther" mound to the south. It is thirty-six feet long and thirty-one feet from head to foot. Whether

or not it represents an animal is difficult to ascertain from appearances. Its height is almost four feet at the center. It is in a perfect state of preservation and is located in the clearing.

LINEAR MOUND No. 12

This mound lies to the east of mound No. 11 and is a rather low structure, being only one and one-half feet high. Its dimensions are sixteen by thirty-five feet. It is in a clearing and is situated near the edge of a wooded ravine that contains the "chain" mounds.

CONICAL MOUND No. 13

This mound is very low and is very easily overlooked. Upon careful observation it was found to be eighteen feet in diameter and about six inches high. This point is on the edge of the oak woods.

LINEAR MOUNDS NOS. 14 AND 15

These mounds could almost be called "bi-linear" for a distance of only two feet separates the west end of No. 14 from the east end of No. 15. Both are in a perfect state of preservation, and are located in the oak woods directly south of mound No. 10. No. 14 is seventeen feet wide and is ninety-six feet long. The height is two and one-half feet. The trend is W. 15° S. Mound No. 15 is fifteen feet wide by one hundred and thirty-five feet long and is two feet three inches high.

The Three Bears

MOUNDS NOS. 16, 17 AND 18

Here is a very interesting group of three effigy mounds. Their outlines, I believe, are very peculiar to the more common type of "bear" mounds, as each has a clearly defined head which slopes downward to about the level of the fore-leg. They are all located in the oak woods and are in good condition.

Mound No. 16, which is the largest of the three, is one hundred feet in length. Its greatest width is forty-three feet and it is approximately three feet high. A path, worn by cattle, cuts diagonally across the center of the body.

Mound No. 17 is forty-four feet from shoulder to foot and is ninety-two feet long. It is three feet two inches high near the shoulder.

Mound No. 18 is the smallest, being thirty-six feet from shoulder to foot, and seventy-four feet in length. The height is two and one-half feet.

OVAL MOUND No. 19

Just off the head of "bear" effigy No. 18 is a low oval mound, approximately ten inches in height. It is twenty by twenty-eight feet, and is in good condition.

CONICAL MOUND No. 20

This mound has several young oak trees growing upon it. It is twenty-five feet in diameter and is about one foot high.

LINEAR MOUND No. 21

This is a fine specimen of a linear mound, being especially prominent in outline. It is fifty-two feet long by twenty feet wide and is about two and one-half feet high. These mounds are all in the woods close to a ravine on the east.

CONICAL MOUND No. 22

This is a very low mound, being only about eight inches high and twenty feet in diameter.

CRESCENT-SHAPED LINEAR MOUND No. 23

As far as I know, this is the only crescent shaped mound in this locality. It is a perfect one. There is, however, much underbrush and dead timber upon its surface. It is twenty-one feet wide throughout and is ninety feet long, the height being just over three feet.

LINEAR MOUND No. 24

This mound is three feet high and is twenty-two feet wide by sixty-five feet long. These sections lie quite a distance back from the lake.

CHAIN MOUNDS

Just east of mound No. 13 of the South Bay Group is the first of a group of four mounds, Nos. 25 to 28, inclusive. These mounds link those of the South Bay Group with the Schuette Group. They are very low with the exception of

No. 28 which is about two feet high. They rest upon a more or less level lowland that is the mouth of a ravine which extends back from the lake southward, almost as far as Mound 24 of the South Bay Group.

Mound No. 26 was partially dug away by some early excavator (see Fig. 21). The dimensions of the mounds are as follows: conical mound No. 25 is 20 feet in diameter by 1 foot high; conical mound No. 26 is 15 feet in diameter and about 8 inches in height; oval mound No. 27 is twenty-one by thirty-four feet and just short of two feet high; conical mound No. 28 is twenty-two feet in diameter and about two feet high. All of these mounds are located in dense underbrush near the lake shore.

SCHUETTE MOUND GROUP

These mounds, Nos. 29 to 48, inclusive (Fig. 23), are all located on the southeast and east shores of the south bay of Pleasant Lake, NE $\frac{1}{4}$, NW $\frac{1}{4}$ of Sec. 4, Springfield twp., Marinette County. Mounds 47 and 48 extend over into the SE $\frac{1}{4}$, SE $\frac{1}{4}$, SW $\frac{1}{4}$ of Sec. 33, Coloma twp., Waushara County. This group of Indian mounds is so named after a Mr. Schuette who owns a cottage that was built upon short poles over and on top of linear mound No. 36. This mound was formerly ten feet wide by one hundred feet long, but since Mr. Schuette decided to build a basement under his cottage, only about four feet of the northeast end of the mound still remains. The rest of the mound was destroyed in 1930. Mr. Schuette stated that no remains or implements were found in its destruction. When I last visited this group in 1931, all of the remaining mounds were still intact. Of the Schuette Group of Indian mounds, ten are linear, five are conical, four are oval and one is an effigy mound of the "bear" type, making a total of twenty mounds. A brief detailed description of each will follow. The land upon which they rest is fairly level and is quite low when compared with the other shores of the lake. Many of these mounds have been dug into during the past years. They average higher than the South Bay Group, and are very prominent.

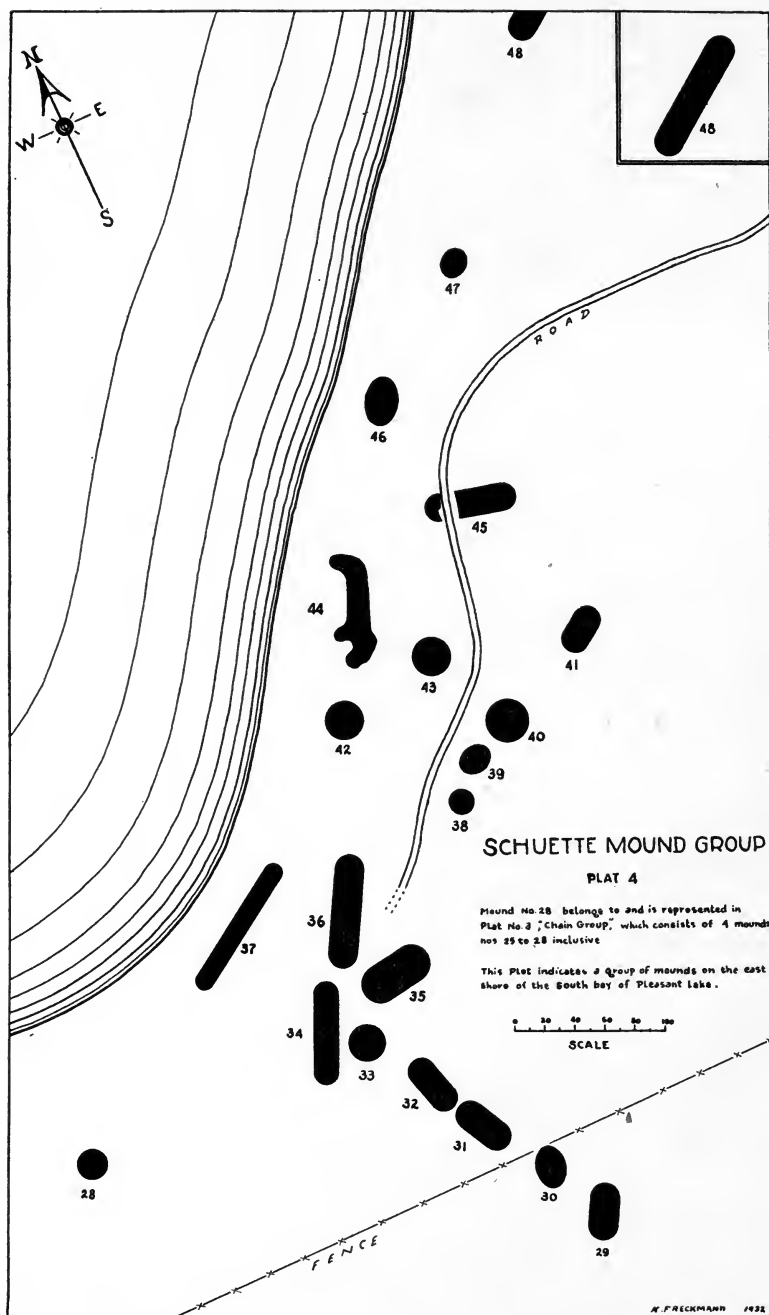


Fig. 23.

LINEAR MOUND No. 29

This mound lies back in the woods, quite a distance from the lake shore. It is eighteen feet wide by thirty-five feet long and is about two feet in height. It is in a good state of preservation.

OVAL MOUND No. 30

This mound is nineteen by twenty-seven feet and is two and one-half feet high. It also is in good condition.

LINEAR MOUND No. 31

The dimensions of this mound are eighteen by thirty-eight feet. It is one and one-half feet high, and is in a good state of preservation.

LINEAR MOUND No. 32

This mound is about two feet high, forty feet long and seventeen feet wide, and is in fair condition.

CONICAL MOUND No. 33

This mound is twenty-four feet in diameter and is two and one-half feet high. There is a circular pit in the center of the mound.

LINEAR MOUND No. 34

This mound is seventy feet in length by sixteen feet in width, and is approximately three feet high. The mound is located in a clearing and is in a good state of preservation.

LINEAR MOUND No. 35

This is a very prominent mound, being three and one-half feet high. It is fifty feet long and twenty-five feet in width, and it also is located in a cleared plot of land.

LINEAR MOUND No. 36

This mound is eighteen by seventy-five feet and is slightly over three feet high. It is situated in a clearing and is in a good state of preservation.

LINEAR MOUND No. 37

This mound was formerly (before 1930) one hundred feet long by only ten feet wide. All but four feet of it has since been obliterated. It was two feet six inches high. The Schuette cottage now occupies the plot upon which this mound was built.

CONICAL MOUND No. 38

This mound is sixteen feet in diameter and is three feet high. It reveals evidence of former diggings.

OVAL MOUND No. 39

This mound is seventeen by twenty feet and is two and one-half feet high. It is in a clearing and is in a good state of preservation.

CONICAL MOUND No. 40

This mound is three and one-half feet high and is twenty-seven feet in diameter. It has a circular pit near its center.

LINEAR MOUND No. 41

This mound is seventeen feet wide by thirty feet long and is almost three feet high. It is in a wooded section.

CONICAL MOUND No. 42

This mound, which has a circular pit near the center, is twenty-five feet in diameter and is one and one-half feet in height.

CONICAL MOUND No. 43

This mound also is twenty-five feet in diameter, but it is three feet high. It is in a good state of preservation and it has several oak trees on it.

BEAR EFFIGY MOUND No. 44

This is another of the so-called "bear" types and is very much after the pattern of the south bay bears, with the exception that it represents the right side of the animal while the left side is illustrated in the "Three Bears". It is in a good state of preservation and is situated about forty feet from the shore line.

LINEAR MOUND No. 45

This mound is eighteen by sixty feet and is two and one-half feet high. A narrow road cuts through its western portion leaving about five feet on that side of the mound and thirty-eight feet on the east portion. Careful examination of the "cut" revealed no evidence of any kind.

OVAL MOUND No. 46

This mound is twenty feet wide and thirty feet long and is two feet high. It has a circular pit ten feet from its southern extremity. It is situated close to the lake shore.

OVAL MOUND No. 47

This mound is nineteen feet long by fifteen feet wide, and is one and one-half feet high. It also has a circular pit near the center.

LINEAR MOUND No. 48

This mound is ninety-two feet long, nineteen feet wide and three feet high. It is situated near the point of this plot of land known as Lutherburg. These sections lie just across the south bay from the Hine linear mound on the west shore.

BUTLER MOUND GROUP

On the southeast shore of the largest portion of Pleasant Lake is a group of nine mounds, SE $\frac{1}{4}$ of SE $\frac{1}{4}$ of SE $\frac{1}{4}$ of Sec. 33, Coloma twp., Waushara County. Of this group, three are linear, five are conical, and one is a "panther" effigy mound (Fig. 24). This section of the lake shore is high and wooded and the soil is of sand. Mounds 49 to 55, inclusive, are in this wooded area, while mounds 56 and 57 are in a clearing to the east of this minor group.

LINEAR MOUND No. 49

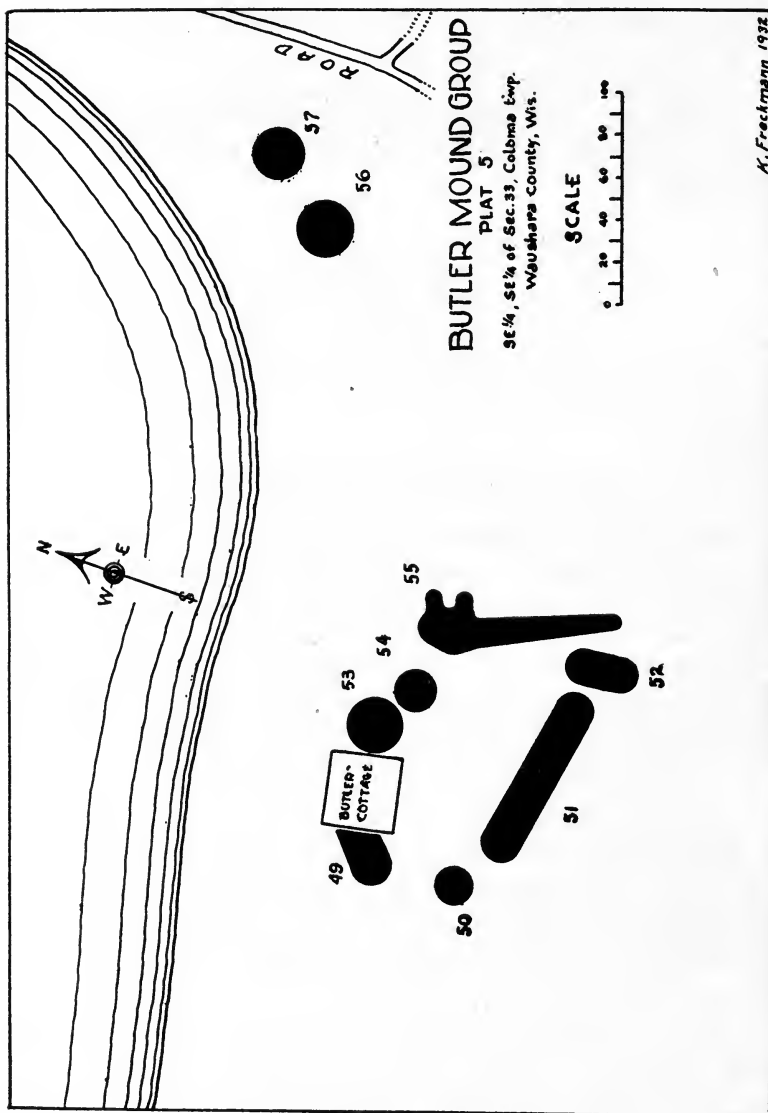
This mound is twenty-five feet long (that is, the remaining portion of the mound) and is sixteen feet in width. The height is about two and one-half feet. The Butler cottage cuts off about one-third of the east end of the mound.

CONICAL MOUND No. 50

This is a small mound that is sixteen feet in diameter and two feet in height. It is in a good state of preservation.

LINEAR MOUND No. 51

This mound is three feet high, and is eighty-four feet long by seventeen feet wide. It is also in good condition.



LINEAR MOUND No. 52

This mound is only thirty-two feet long by fifteen feet wide, and is approximately three feet high.

CONICAL MOUND No. 53

This is the most beautiful conical mound as well as the most perfect mound of this type on the lake. It is twenty-seven feet in diameter, four and one-half feet high, and is in a perfect state of preservation.

CONICAL MOUND No. 54

This mound is somewhat smaller than the preceding mound as it is nineteen feet in diameter and three feet two inches in height.

PANTHER EFFIGY MOUND No. 55

This effigy mound is extremely interesting because it appears that the entire mound was not built at one time. On the contrary, it was constructed at two different periods. I am convinced that the original mound was an oval-shaped mound but later it was improved upon and an effigy was the ultimate result. The oval part of the mound is four feet in height while the legs and tail are only about one foot high. It is in exceptionally good condition and is burdened with a few oak trees on its body and tail.

CONICAL MOUND No. 56

This mound is twenty-seven feet in diameter and is approximately two feet in height. It is in a fair state of preservation and is located between the lake shore and the section road.

CONICAL MOUND No. 57

This mound is twenty-four feet in diameter and is about one and one-half feet high. It has a pit near the center.

This entire report is only of the mounds of which I have so far obtained accurate dimensions. As the Archeological map will show, there are still several small groups of Indian mounds in this locality of which I have no detailed record, except that I know that the groups are in such positions as are designated upon the map. I might mention here that there is a group of large conical mounds, about fourteen or fifteen in number, at a place designated on the

map as the Muske Group. From one of these mounds I was able to obtain some of the burial remains of four individuals. However, I did not excavate the mound.

There is also a small group of conical mounds on the north shore of Pleasant Lake, as well as one lone panther effigy near this group. These, I shall enter as additions to this record as soon as possible.

SOME ODD INDIAN TOOLS

Geo. Overton

The implements used by prehistoric people constitute the major part of the evidence we have which enables us to reconstruct a history of their activities. An implement which is common on village sites over a large area will indicate by its scarcity or abundance whether the articles it was designed to make were in general or occasional use. I believe we should make a closer classification of our artifacts under the guidance of our able leaders and file a census of them so that future students may have abundant data available. Too much stress has been placed on the unusual or the spectacular, such as weapons, pipes, ornaments and ceremonials. The common everyday tools have not had their proper share of studious attention by the amateur archeologist. So long as we fail to supply definite information of our activities our leaders will be handicapped in forming definite conclusions.

A tool which we often find is similar in outline and size to a common arrow head. One side is flat or may be slightly concave so the end has a distinct downward turn. Chipping is done largely from the flat side, making the other side rounded. Locally we refer to these artifacts as "turtle backs". They are made of several kinds of stone. I have one formed out of a chip of common field "hard head", several of grey chert, one of white quartzite, two of a brown flint from an ancient beach, and a beautifully made specimen of chalcedony. This latter piece was found on the old Clark's Beach Campsite back in 1893. Practically all of these pieces have a well-formed tang. How this tool was hafted or what use was made of it is yet problematical.

A small triangular scraper is quite common on the old

sites along our part of the Fox river. This little artifact is from $\frac{3}{4}$ inch to 1 inch long and is made of all our common flints and of quartzite. Seen from one side it closely resembles the small triangular bird points. Some are very delicately chipped while others are more crudely formed, but about them all there is a sameness that permits a definite classification. They are made of quite thin flakes worked from one side only, but do not have the pronounced hump of the 'turtle backs'. This little tool must not be confused with small specimens of the 'snub nosed' tanning scraper, common to most village sites, which has a blunt semicircular working edge.

A crudely formed tool quite often found in our locality, we call, for want of a better name, a round nosed spud. This is also a flat sided tool. The flat side may curve slightly toward the edges. There is always a distinct upward turn of the flat side toward the cutting end. The cutting edge is chipped from the flat side only at the time the final shape is given the tool. The point is generally rounded, measuring from $\frac{1}{2}$ -inch to 1-inch in diameter. While the working end is well and often nicely formed there appears little and sometimes no attempt to form a tang. These spuds may be almost any shape as though an irregular piece of flint were taken from workshop debris and a projection worked to form the desired tool. The specimens we have found are from $1\frac{1}{2}$ inch to $2\frac{1}{4}$ inches long and are grey chert.

We also find a few spuds which have the cutting end brought to a point like an arrow head, but with the distinguishing characteristics of the upturned point. What might be called the lower side is flat or slightly convex. While some of this variety are crudely formed with little or no attempt to shape a tang, others are reworked over the major portion of their surfaces. Several are similar in outline to a leaf-shaped arrow point. Two in particular, one of a fine grained grey flint and one of yellow quartzite, are among the finest examples of concoidal flaking in our collection. The artisans who made these artifacts possessed the ability to shape stone exactly to their will. The outstanding characteristics of these and similar pieces show without question that these artifacts had a definite place among the tools with which those people of old carved out a living.

ARCHEOLOGICAL NOTES

Announcement

This is the last number of this periodical to be published with state funds. Its brevity is accounted for by the fact that the amount remaining available from the state's appropriation would not permit a more expensive edition. This in no way establishes a precedent in the size of our publication, in spite of the fact that it must be financed from now on out of the general fund accruing from dues. To be sure we must economize, but substantial economies are possible without a material reduction in the size or quality of the *Archeologist*. In the first place, a marked reduction in the cost of publishing has been accomplished through engaging the services of a different printing concern. Second, the size of each issue will be held close to a maximum of thirty-two pages. Third, all illustrative cuts over a maximum of two pages per issue must be financed by the contributors. As a result, the Publication Committee pledges a continuance of established standards in interest and quality for your paper, depending, of course, upon the extent to which members of the Society contribute articles; naturally, the committee should not and does not propose to write the paper themselves. We solicit your continued and augmented support.

—THE PUBLICATION COMMITTEE.

Field Work

Continued research of an anthropological nature is planned in Wisconsin by the State Historical Museum under the direction of Chas. E. Brown. It is hoped that the Green Bay Public Museum can be active in the field with Theodore T. Brown in command. Aside from analytical laboratory work, the Milwaukee Public Museum will not be able to engage in any research. Many members of the Society have expressed their expectations to engage in archeological survey work in various parts of the state.

Midwest archeologists outside of Wisconsin plan to enter the research field to a promising extent. Dr. Earl H. Bell will excavate old Siouan sites in Nebraska. Students of the University of Minnesota, under the direction of Dr. A. E. Jenks, plan archeological research in that state. Glenn Black, for the Indiana Historical Society, will examine Adena and Fort Ancient cultural sites in Dearborn County, Indiana. Archeologists of the University of Chicago, headed by Thorne Deuel under the direction of Dr. Fay-Cooper Cole, are now at work near Joliet and will engage in other research projects in Illinois. Dr. Charles R. Keyes will continue his study of Iowa Woodland and Oneota cultures augmented by field survey work. James Griffin, at the National Research Council Ceramic Repository, University of Michigan, has started on an intensive study of pottery for the eastern half of the United States.

Miscellaneous

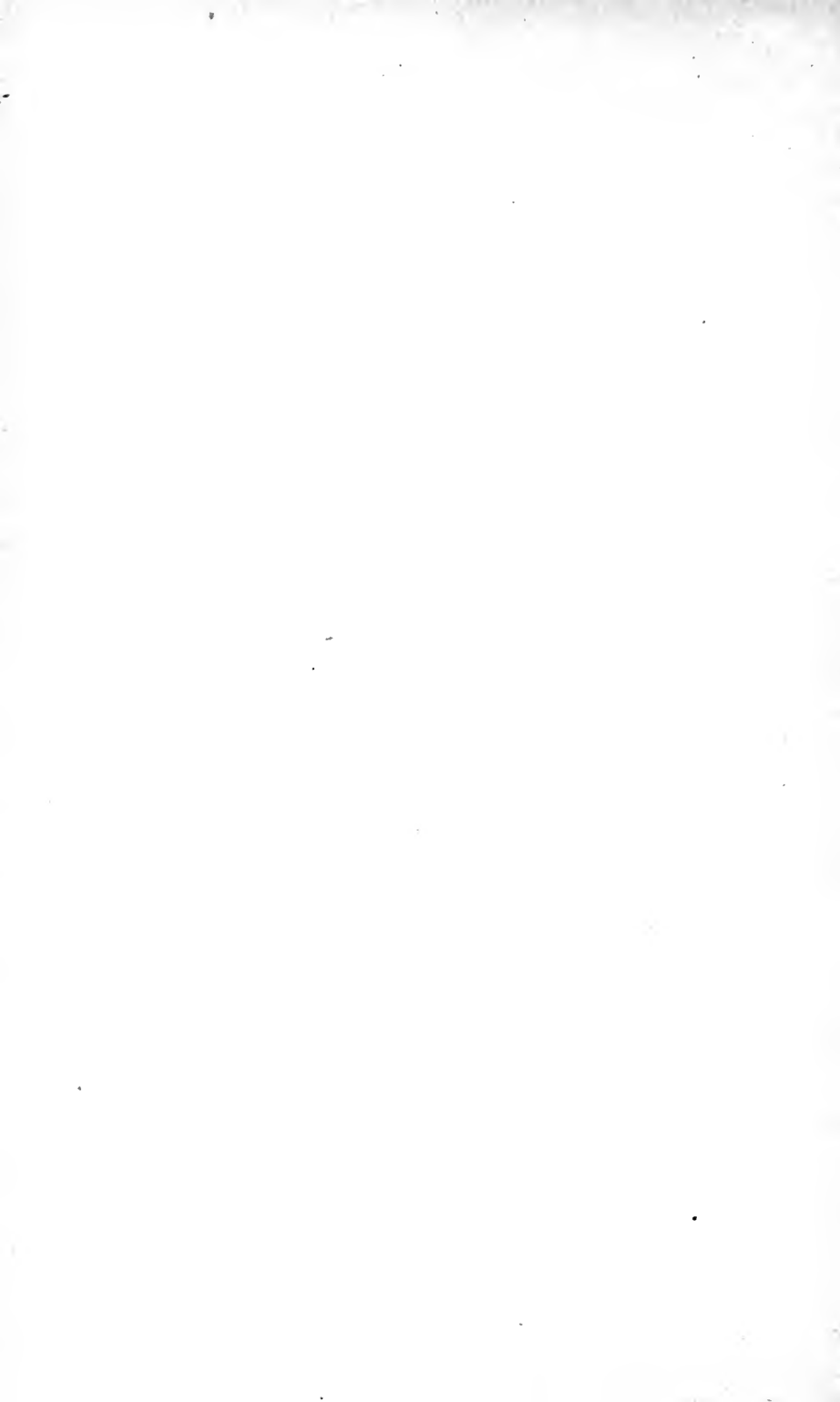
The famous old fortress of Louisburg, Cape Breton, Nova Scotia, is being restored by government engineers. The fort was built by the French in 1700, and at that time was one of the strongest fortresses in North America. Its capture by an expeditionary force from New England in 1745 was one of the major military exploits of the 18th century.

New Publications

The Department of Indian Art, Denver Art Museum, has issued the following leaflets: No. 55, Tribes of the Southwest, March, 1933; No. 56, Colors in Indian Arts—Their Sources and uses, March, 1933; No. 57, The Virginia Indian Tribes—17th century, April, 1933; No. 3 (2nd Edition), Navaho Spinning, Dyeing and Weaving, April, 1933.

The 3rd report on the Archeological Survey of Eastern Colorado, by E. B. Renaud, University of Denver, Dept. of Anthropology, has been released. March, 1933.

A recent issue of the American Anthropologist, Vol. 35, No. 2, 1933, contains interesting articles as follows: The Plains Culture in the Light of Archaeology, by W. D. Strong; Has the X-Ray a Place in the Archaeological Laboratory? by P. F. Titterington. There are other articles by Ellen S. Spinden, Robt. H. Lowie, Eugene Golomshtok and Hartley B. Alexander.



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NEW SERIES

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Act, Oct. 3, 1917. Authorized Jan. 28, 1921.**

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The Society is a state department, receiving a part of its support from the state. Its funds are under state control. Its work is well and widely known. It has received the approval of leading American archeologists, who agree that it deserves the full support of all Wisconsin citizens interested in the state's archeological history.

The Society's activities comprise the location, recording, investigating and preservation of Wisconsin Indian remains, folklore and history, all of which are rapidly disappearing and must be recorded and saved immediately if ever.

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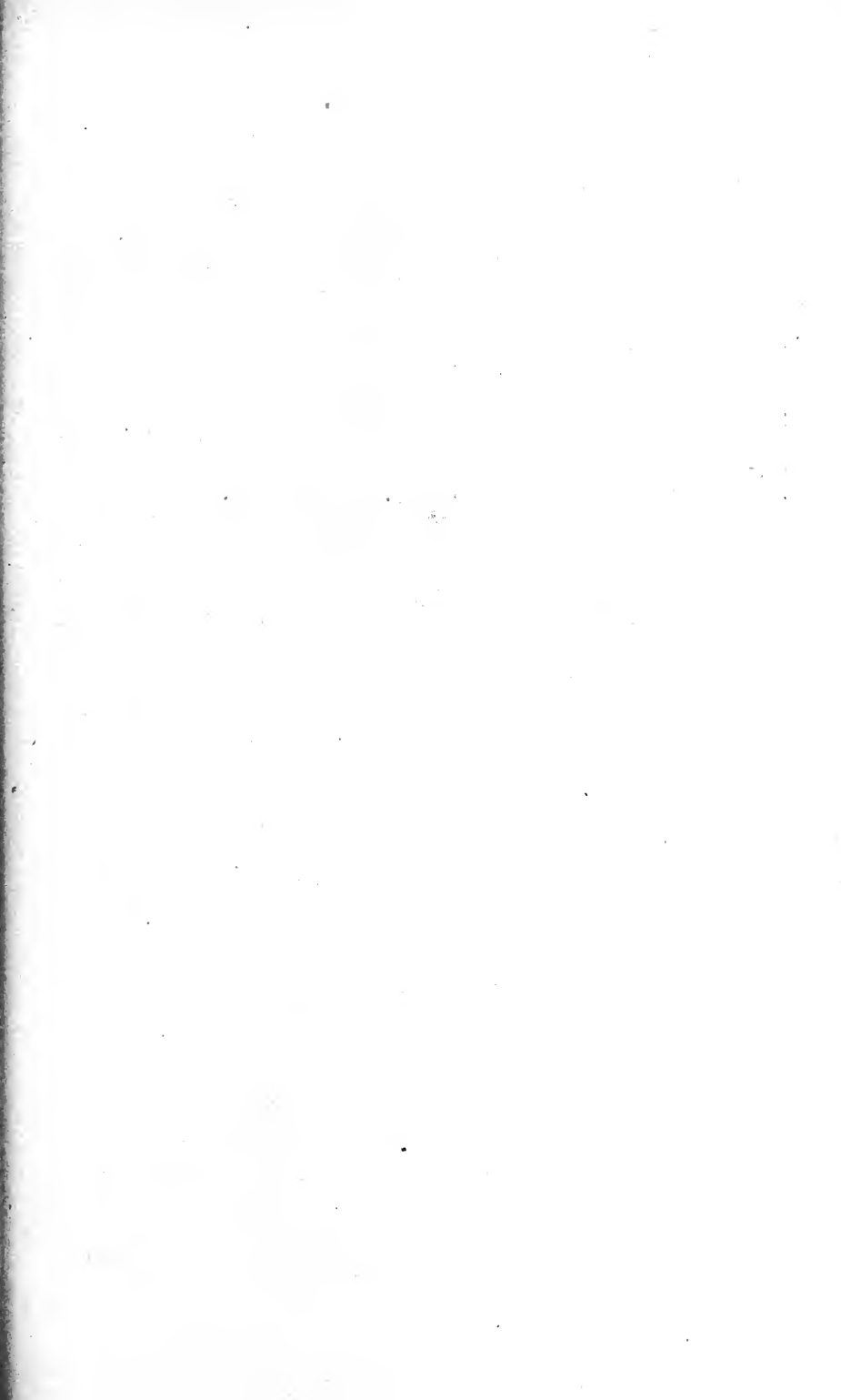
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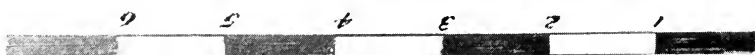
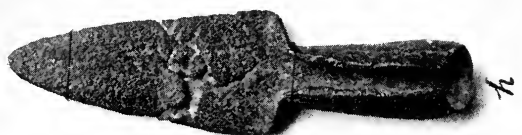
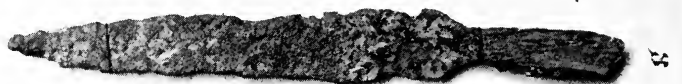
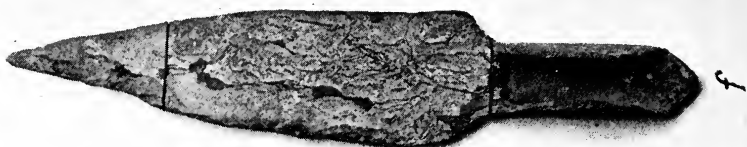
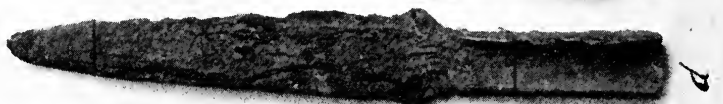
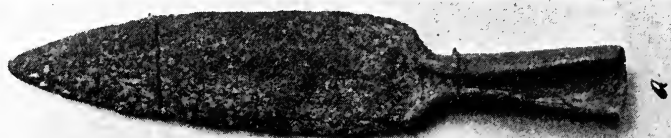
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NO. 1

NEBRASKA ARCHAEOLOGY

Earl H. Bell

History

In this paper it is my desire to outline briefly the archaeological cultures of Nebraska as we now know them. Archaeology in Nebraska is yet in its infancy and most of what is known has not yet been published. The earliest work was done in the early nineteen hundreds by amateurs living in the eastern part of the state. Chief among these was Dr. R. F. Gilder of Omaha, who discovered the so-called "Nebraska Loess Man", and Dr. Edwin H. Barbour of the Department of Geology. The first systematic work was done by F. H. Sterns, who wrote a doctorate thesis on the archaeology of Nebraska. This thesis is in storage at the American Museum, but a portion of it was published in the *American Anthropologist*¹.

Later on Mr. A. T. Hill moved to Hastings, Nebraska. Mr. Hill is a most careful worker. He is best known for his location of the Pawnee site near Red Cloud, Nebraska, which was visited by Zebulon Pike in 1806². Mr. Hill continued work and through his influence the Hastings Museum was organized. This museum contains the largest and best collection of Nebraska archaeological specimens, all carefully catalogued. Besides this Mr. Hill has a complete record of all the information which goes with the material. His work is of the highest caliber, equal to that of any trained archaeologist. Since the establishment of the University of Nebraska Archaeological Survey he has co-operated with it.

¹ Sterns, F. H., "Stratification of Cultures in Eastern Nebraska", *American Anthropologist*, 17, 121.

² Nebraska History Magazine, July-Sept., 1927. The entire issue is devoted to this site.

In 1929 Dr. William Duncan Strong came to the University and organized the survey which has had a party in the field each summer since that time. The first publication resulting from their work will appear in the next annual report of the Bureau of American Ethnology.

Nature

Unlike the eastern areas of the United States, there are few if, indeed, any artificial mounds. The campsites resemble those of other areas except for the nature of the artifacts. I would say that they are on the average about as rich in artifacts as those of Wisconsin. It must be remembered, however, that Nebraska does not have such an intensive network of rivers as the woodland areas, and sites are correspondingly far apart.

Our most outstanding surface features are house depressions and circles. Before the advent of the horse, and after the introduction of agriculture, most Nebraska Indians appear to have been settled in contrast to the modern plains Indians of the historic period. Some tribes, notably the Pawnee, retained this characteristic well into historic times. These settled tribes built semi-subterranean earth covered houses which are in some cases yet discernable as depressions, sometimes encircled by a low embankment formed by the roof covering which was washed to the margins of the houses.

Unfortunately erosion in this state is rapid and, since the villages were often on the terraces, in many cases all surface indications have been covered with several feet of earth. To find these villages one must search for a likely place. Visualize a plain without a scrap of pottery, a piece of flint, or a mound. Then test-pits must be dug in search for traces of burnt earth, charcoal, artifacts or other indications of the floor of a house. The technique of excavation is to uncover the floor, discover the center and outer post holes, and trace the outline of the house and entrance by the post holes. This technique was developed by Mr. A. T. Hill.

When the houses were destroyed by fire we are exceedingly fortunate as such houses contain many more artifacts than those which were vacated. In many of the houses as

well as in the area outside of them, there are often cache pits which are sometimes rich in artifacts stored there. But more often they are barren.

The burials are usually on high ground, most often on hilltops, and are frequently of the ossuary type, that is, the bodies are first exposed and then, at more or less regular intervals, the bones are placed in the hilltop ossuaries, after the pattern of the Iroquois. In most cases the individuals do not appear to have been bundled and few artifacts except shell beads are buried with them.

Cultures and Culture Sequences

We shall now turn to the established cultures and their stratigraphic sequence in so far as we know this. However, it is necessary to keep in mind that what is written here is only a tentative outline. Much must be filled in and many changes will be made as more information is obtained. Nebraska is a large state and only a small portion of it has been worked to date.

At the lowest level we find a very old non-pottery culture. This was first discovered in association with extinct species of bison (usually *Bison occidentalis*). The first discovery should be credited to Mr. F. G. Meserve of the Grand Island College, who found a dart point in a bison quarry near Grand Island³. Later Mr. C. Bertrand Schultz found similar points at two other sites⁴ and my attention was called to a fourth site⁵. The points, although they have only a vague resemblance to the Folsom type found in Folsom, New Mexico, are clearly too large for arrow points and were probably used to tip spears.

On Signal Butte near Scottsbluff, Nebraska, Dr. Strong of the Bureau of American Ethnology excavated a stratified site, the bottom two layers of which represented a non-pottery culture. While it cannot be established definitely as

³ Meserve, F. G., and Barbour, Erwin H., "Association of an Arrow-point with *Bison Occidentalis*", Nebraska State Museum Bulletin 27, 1932, Vol. 1, pp. 239-243.

⁴ Schultz, Bertrand, "Association of Artifacts and Extinct Mammals in Nebraska", Nebraska State Museum Bulletin 33, 1932, Vol. 1, pp. 271-282.

⁵ Bell, Earl H., and Van Royen, W., "Investigation of a site in western Nebraska yielding artifacts embedded in a sand cliff", Science Service Research Aid Announcement, No. 181.

yet, there are certain physiographic resemblances between the formation of the culture-bearing portion of Signal Butte and some of the deep sites. Moreover, there are also a few resemblances between the artifacts of the Butte and the other sites. Hence they may very likely be contemporary.

Although there is a possibility of these sites being of Pre-Wisconsin age, such antiquity is as yet far from proved. So far as we are concerned, it is necessary only to say that they as yet represent the earliest known Nebraska culture.

The next established culture is thus far known in Nebraska by only one site located in the eastern part of the state, near Murray, Nebraska⁶, but also occurs across the river in Iowa. In both states it is buried from 20 to 22 feet beneath the surface. This is our oldest known pottery site in Nebraska. We have one complete and one restored pot and many sherds from this site. The paste is grit tempered and granular. The pots have a pointed base and a slightly constricted neck with no handle or lugs. Some are perfectly plain, while others are cord marked, and still others have the imprint of reeds upon the surface.

The pottery of this culture bears a marked resemblance to the "Lake Michigan" ware of Wisconsin and probably represents the Western aspect of the Lake Michigan phase of the Woodland basic culture.

We are exceedingly fortunate in Nebraska to have yet another clue to culture sequences. This time it is the reports of early travelers which aids us in establishing a cultural stratigraphy. In the records of the early explorers frequent mention is made of round, semi-subterranean houses. Rectangular houses of this type are typical of many archaeological sites, but not once are these mentioned by the travelers. Hence we may judge the square house people to have preceded the builders of the round houses.

High on the bluffs of the Missouri Valley we have a square house group who made a grit tempered pottery which tends to be flaky rather than granular. The body is ellipsoidal or globular with a rounded base, the rim flaring, and the lip scalloped or notched. Both loop handles and lugs, either pierced and unpierced, are common. Many of the

⁶ Sterns, F. H., "Stratification of Cultures in Eastern Nebraska", *American Anthropologist*, 17, 121.

pots are smooth and undecorated but cord marking is also frequent. At some sites incised designs are the rule.

It will be noted that this appears to be a variant of the well known Upper Mississippi phase of the Mississippi basic culture. We now know several Nebraska components of this culture.

There seems to have been another square house people centering in the central portion of the state. While the houses bear a close resemblance to those of the Missouri Valley, there are certain marked differences in cultural determinants. For instance, the villages of the Missouri were built on the bluffs, while those to the west are located on the river terraces. The pottery is also markedly different. While the Missouri type in the main has a neck which is little more than the line of juncture between the flaring rim and the contracting upper walls of the body, those of the central part of the state have an angular neck and a well developed collar, usually wedge shaped. Cord marking is highly developed and designs are often applied by that technique. The bases are not conoidal nor yet rounded. This pottery, though apparently not the houses, reached the western margin of Nebraska where it is known to occur in rock shelters and the upper level of Signal Butte.

If these people do not represent the early Pawnee, they certainly exerted an important influence upon their culture. From one site we have evidence that they changed from the square to the round house which was the pattern of the Pawnee lodge.

The Pawnee who built round houses are the next people with whom we deal. Their culture is similar to that of the square house people of central Nebraska with two notable exceptions, pipes and pottery. The square house people had pottery pipes with the bowls frequently in human effigy, while the Pawnee preferred stone pipes. The pottery of the Pawnee is characterized by a highly developed high collar and a globular bowl.

The following table represents the known cultures.

NEBRASKA CULTURE SEQUENCES

WESTERN NEBR.	CENTRAL NEBR.	EASTERN NEBR.
Historic non-pottery nomads	Historic non-pottery	Historic Non-pottery
	Round house people Pawnee	Round house people Sioux and Pawnee
Signal Butte Strata Caves of western Nebr. same pottery	related $\leftarrow \leftarrow \leftarrow$ Square houses $\leftarrow \leftarrow \leftarrow$ not related $\rightarrow \rightarrow \rightarrow$ but possibly contemporaneous	Square house Pottery of Upper Miss. phase
Non-pottery	Non-pottery	Pottery of the Lake Michigan phase
		Unknown

Sometimes associated with extinct Bison.

THE CAHOKIA MOUND GROUP AND ITS SURFACE MATERIAL

P. F. Titterington

The Cahokia Mound group lies in southeastern Madison and northeastern St. Clair counties, Illinois, near the Mississippi River; the boundary line between the two counties passes through the center of the group. According to Moorehead, there are at least eighty-five mounds scattered over an area of approximately three thousand acres. At the present time there are only fifteen or twenty of the larger mounds that are not under cultivation and in shape they are either conical or truncated rectangular pyramids. All the other mounds have become so defaced by the plow that their type cannot be determined.

The largest mound, and incidentally the largest mound in North America, lies in the north central portion of the group. It is known locally as Monks' Mound on account of the Trappist Monks who lived on its summit from 1808 to 1818. It is a truncated rectangular pyramid, 1,080 feet long, 710 feet wide, and 100 feet high, the base covering almost seventeen acres. It is composed of four distinct terraces and a ramp that leads from the lowest terrace which is on the south to the original ground level. At one time there was a small conical mound in the center of the third terrace which is at the ninety-seven foot level or just three feet below the top or fourth terrace.

This and several of the surrounding mounds are now included in a State Park, and will be preserved for the proper scientific study.

About ten miles to the north, there is a small group of mounds very much like the smaller Cahokia mounds. There is a similar group about fifteen miles to the east and another small group about eighteen miles to the south. In the development of downtown St. Louis, which lies to the west and across the Mississippi River, twenty-six mounds were destroyed, the largest (Big Mound) covering a square block at the base and rising to a height of fifty feet. Some are of the opinion that these outlying mounds should be included

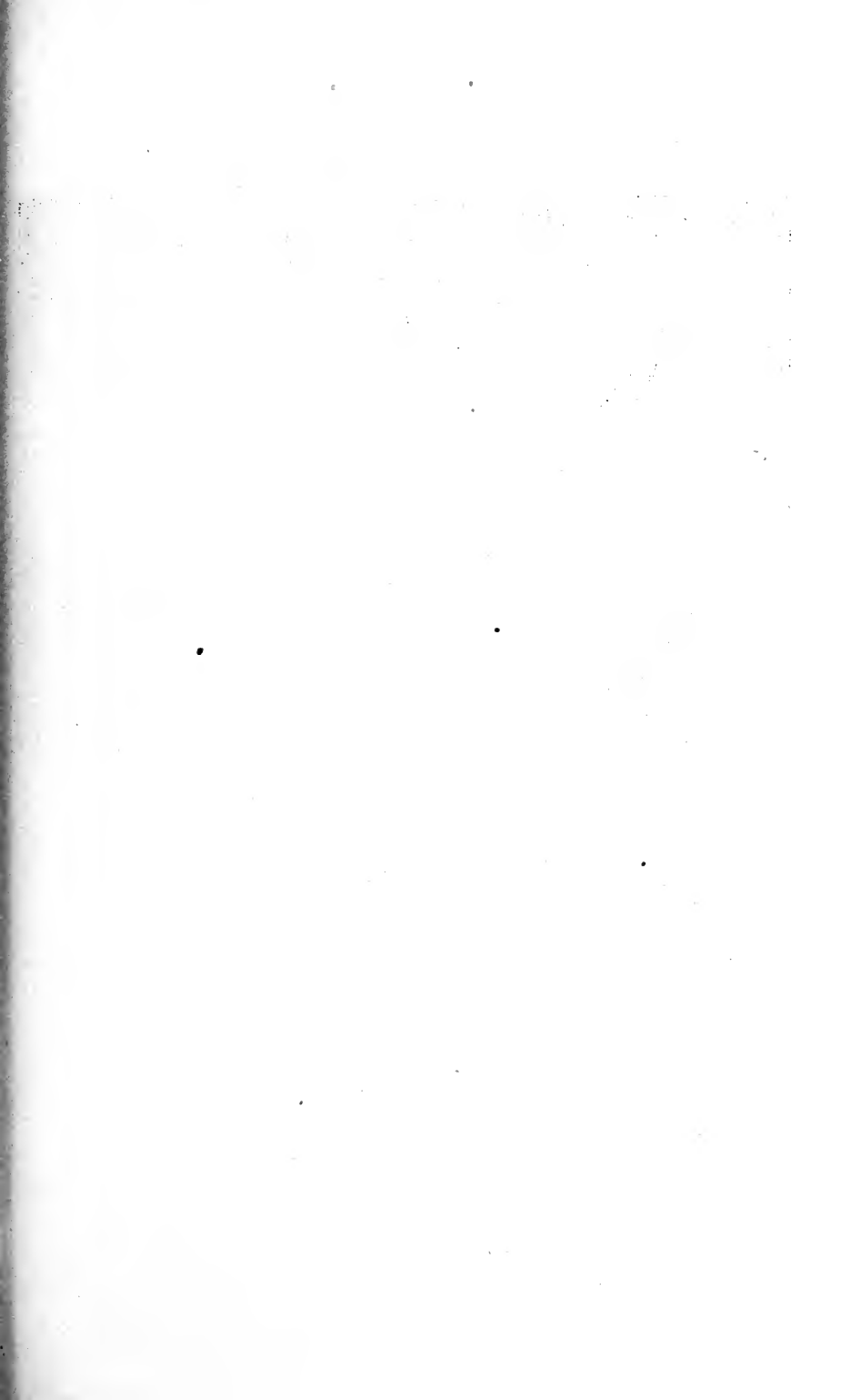
in the group. In favor of this is the fact that it has not been uncommon in plowing and excavating to unearth artifacts of the Cahokia types.

Moorehead states that the village site is six miles long and varies from several hundred yards to a mile in width, the heaviest occupation occurring in about five hundred acres south and east of Monks' Mound. In his test pits he found the camp refuse to vary from twenty inches to four or five feet in depth, and also found refuse under several feet of new land formed by overflow.

The material to be reported is from the above mentioned village site. It is all from the surface and represents the efforts of one man over a period of twenty years, another over a period of fifteen years, and my own over a period of twelve years, plus material secured from the local farmers. Fortunately, all of it could be brought together and is now in my collection as a single unit.

Dr. Cyrus Thomas states in the Twelfth Annual Report of the Bureau of Ethnology that nearly all relics found at Cahokia come from the low ground between the mounds. This is a well recognized fact today, it being rare to find an artifact on a mound, and then it is usually found on the lower portion, in all probability having been carried up by the plow.

The greater part of the land is plowed in the fall, and the hunting begins after there has been a good rain. We know the location of the more productive areas and can usually make ten or twelve trips before the spring planting. All worked flint and a large number of potsherds are picked up, brought in, cleaned and sorted. An average trip will yield eight or ten arrowheads, fifteen to twenty desirable sherds and an occasional piece of one of the other types. We have made trips in which nothing worth keeping was found and our best trip, after an early spring cloudburst, netted forty-seven arrowheads, one spade, and about one hundred sherds. The sherds have been saved only during the past six years at the suggestion of W. C. McKern of the Milwaukee Public Museum. Those obtained during the first four years were given to McKern for comparison with those of the Aztalan group, so that at the present time our study collection is not representative, especially in regard to deco-



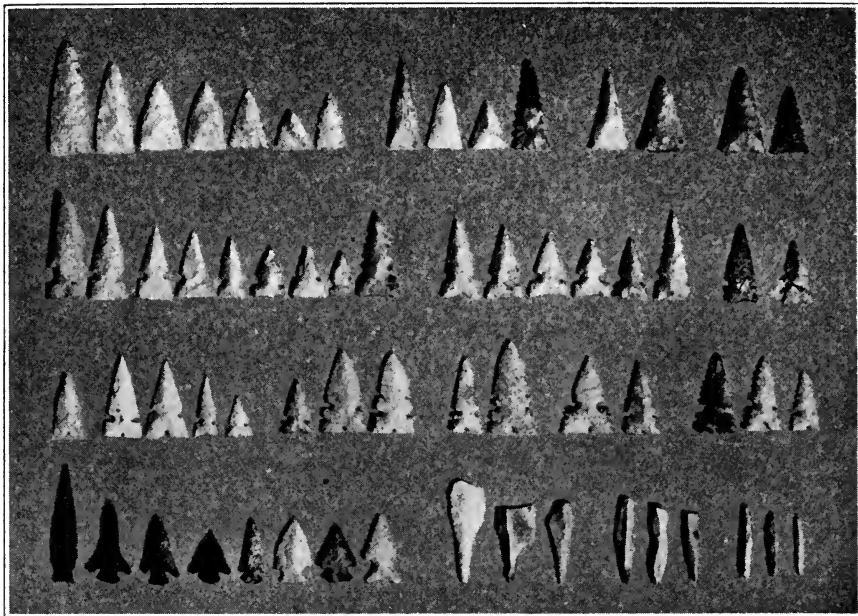


Fig. 1. Types of Cahokia points.

1st Row: Triangular points. The first three groups have convex, straight, and concave sides—in the order named. All are straight based. The last group is concave based.

2nd Row. Side-notched points. The first group is straight based and the second is concave based. The last two points are four and six notched respectively.

3rd Row: Base notched and multiple notched points. The first point is of the triangular type with a base notch. The second group is three notched; the third, five notched; the fourth, seven notched; the fifth, nine notched; and the sixth, serrated.

4th Row: The first group, corner-notched points.

The last three groups represent the drills, the first of which has more or less definite bases, the second is partially worked spicules, and the third—completely worked spicules.

rations. In the University of Illinois Bulletin, volume thirty-six, number four, there are very good illustrations of the pottery types as well as other artifacts from Cahokia.

Of 253 sherds on hand, 111 are shell-tempered, 99 are hole-tempered, and 43 are grit-tempered. Upon close study of the hole-tempered, a small amount of shell is quite often found, suggesting that the holes are due to the disintegration of the shell. Sherds have been found that, from external appearances, would have to be classed as hole-tempered, but, upon breaking them, the unweathered portion is seen to be heavily shell-tempered.

We also find lumps of hard, light brown, burnt clay in which there are imprints of grass and reeds. These may be fragments of walls or fire-places.

In the collection there are 2,523 arrowheads that can be classified; they range from five-eighths to two and three-eighths inches in length. 1,020, or 40.4%, are triangular. 1,503, or 59.6%, are notched. Of the 1,020 triangular points 672, or 65.8%, have slightly convex sides, 252, or 24.7%, have straight sides, and 96, or 9.5%, have slightly concave sides. Classifying them according to the bases, 958, or 93.9%, are straight and 62, or 6%, are concave (figure 1).

The 1,503 notched points are divided into two groups: 1,284, or 85.4%, side-notched and 219, or 14.5%, corner-notched. Classifying them according to the bases, 1,217, or 94.7%, are straight and 67, or 5.2%, are concave. In the side-notched, the notch is sufficiently far down from the base to make the head rather wide. The group of the corner-notched includes all the points that do not have the wide heads. There is no doubt that some of these should be classed as side-notched, but since the heads are not rectangular, they are not included in the predominating group.

Of the total number of arrowheads, 211, or 8.3%, have a notch at the center of the base. Three are of the triangular type and 208 are side-notched. They are worthy of special note on account of the selection of materials and exceptional workmanship. The materials are of the finest. Fifty-one are translucent, a few of which are made of a highly colored, almost transparent agate. Only a very small per cent of the other types is made of translucent material. The

chipping is also of the finest, the arrowheads being thin, well made and regular, most of them being completely chipped on both sides and only a few being made from flakes.

Most of the base-notched points (177) have one pair of side notches and are known locally as the three-notched points. A few of them have more than one pair of notches and are known as the multiple notched. In this latter group, one pair of notches is considerably deeper than the others and is referred to as the primary notches, while those that are more shallow are called secondary notches.

There are seventeen with one pair of the primary and one pair of the secondary notches or five-notched points; there are five with one pair of primary and two pair of secondary notches or seven-notched points; there are two with one pair of primary and three pair of secondary or nine-notched points; and there are seven with one pair of primary notches in which the secondary notches are so close together that they lose their identity and the points are classed as serrated.

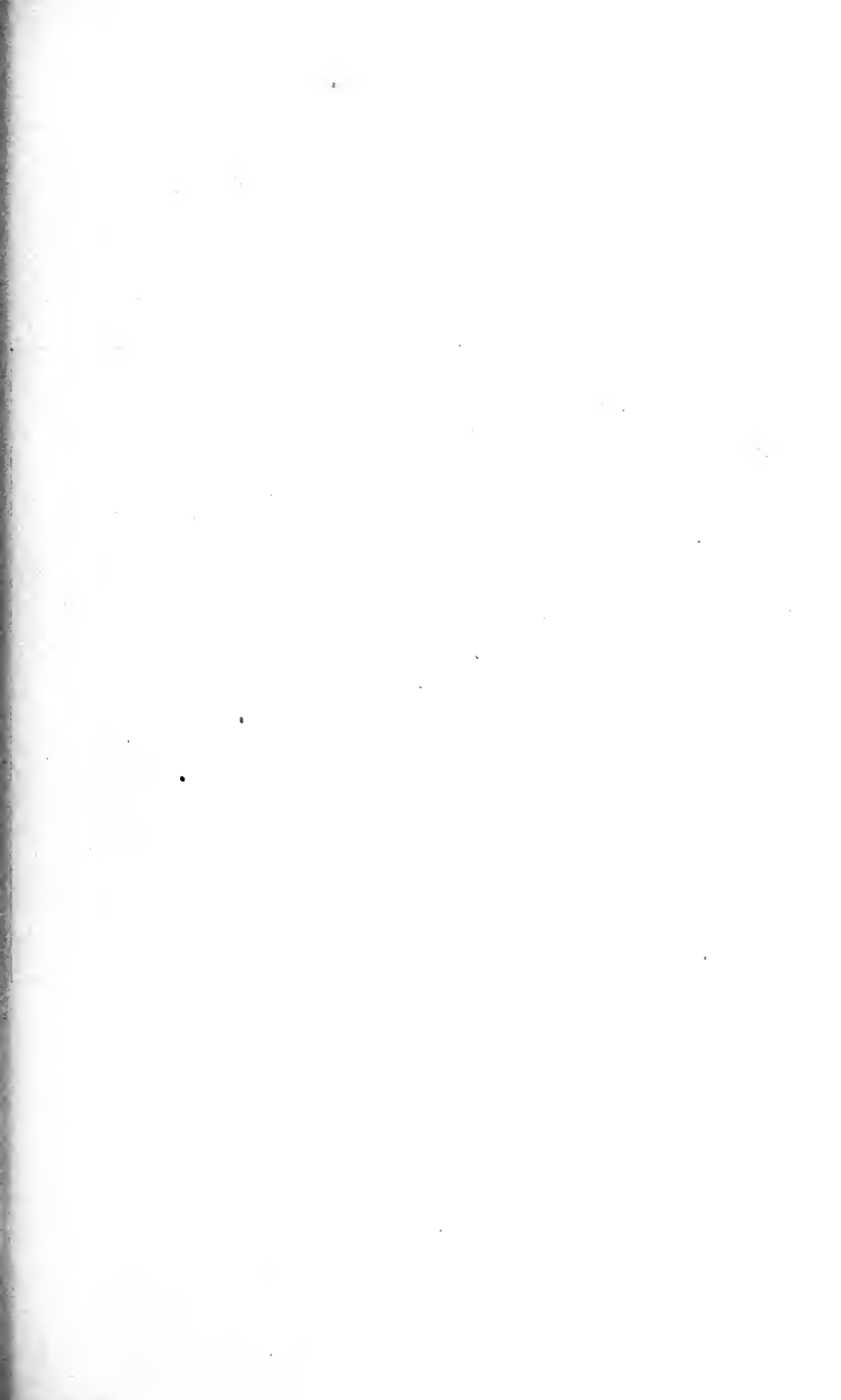
The secondary notching is occasionally seen in those in which there is no base notch. There are twenty-one in which there is one pair of primary and one pair of secondary notches or four-notched points; and there are four in which there are one pair of primary and two pair of secondary notches or six notched points.

In all the multiple notched points, the secondary notches may be above or below or above and below the primary notches.

Fifty-five of the triangular and twenty-five of the notched, or 3.1% of the total, are serrated. There are ten points upon one side of which there is a highly polished strip down the center. This polish is the same as that seen on the bits of agricultural implements, and suggests that they might have been made from chips from the bits of these implements.

There are 126 drills, twenty-eight of which have distinct bases. The others have been made from spicules of flint, some of which are chipped only along one edge, some on two edges, and others on all edges.

There are four of the larger knives that are perfect, one six inches long and three seven inches long. They are very



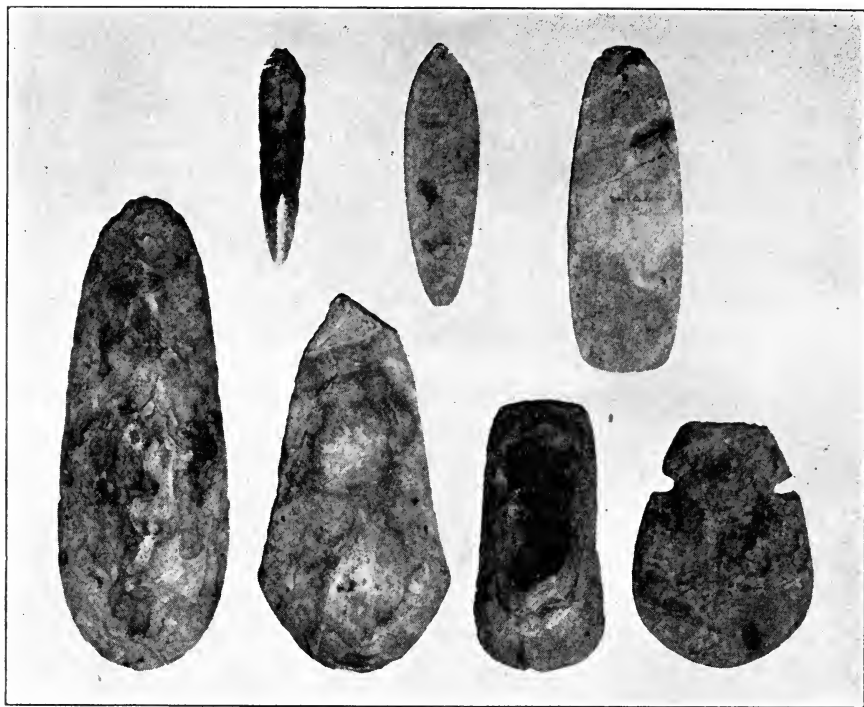


Fig. 2. Types of large stone implements from Cahokia.

1st row: Pick, large knife, and chisel.

2nd Row: Oval spade, flared spade, straight sided hoe, and notched hoe.

thin, of very good workmanship, and are usually made of the same material as the agricultural implements. Occasionally, one is found that is made of a translucent material. There were no doubt a large number of these knives in use because of the quantity of fragments found (figure 2).

The agricultural implements are arbitrarily divided into two groups: the hoes under eight inches in length and the spades over eight inches. The hoes are of two types; the notched and the unnotched. The spades are also of two types: those with oval bits and those with flare bits (figure 2). It has been noted that in oval spades the width is less than half the length, while in the flared type it is equal to half or more than half the length. Some of the smaller hoes appear to have been made from the bits of broken spades. For instance, there is one hoe that has an unpolished bit and a highly polished base with islands of polish on the faces that were not flaked off in revamping the piece. There are two notched and ten unnotched hoes and twenty-one oval and five flare bitted spades.

There are other types of flint pieces that are not classed as agricultural implements. The chisels are rectangular oval pieces ranging from eight to twelve inches in length and about a third as wide. They are usually rather thin with the bits showing evidence of use, but no polish as seen on the bits of the hoes and spades. The picks range from four to seven inches in length and about one and a half inches wide, being roughly semi-circular in cross section. One end tapers to a rounded point which has been ground until all evidence of chipping has been effaced, leaving a very smooth surface (figure 2). There are three chisels and four picks in the collection.

A large number of granite axes and celts are found, but nearly all of them are too badly broken for classification. There are one eight-pound perfect grooved ax and five perfect small celts. There is a small low mound about a quarter of a mile north of Monks' Mound from which a large number of unfinished celts have been taken. Several of these are in the Missouri Historical Society collection, the largest of which weighs a little over twenty-five pounds. There are two gouges—celt shaped pieces with one side flattened and the bit somewhat curved with the convexity of the curve

away from the flat side. The discoidals are from two to four inches in diameter and one inch or a little more in thickness, the concavities extending all the way to the outer edge. Occasionally, one is perforated at the center.

A few pipes have been found, mostly made of pottery. Some are "L" shaped, and a few are in the effigy of a tree stump with four or five of the larger roots represented around the edge of the base. The stem-hole is near the base between two of the roots. Of four or five of these seen, none has been perfect and we have only one fragment.

Shell was in quite common usage at Cahokia, both the fresh water and the marine. The fresh water shells were used as spoons and as hoes and for the making of disc beads and other ornaments. The larger marine shells were used as dippers after the spirals had been removed and for the making of gorgets and disc beads. The spirals were made into cylindrical beads and awls. The smaller marine shells, without any alteration except a hole or a groove at the tip, were used as pendants and ornaments. Various types of snail shells were used as beads. According to Dr. F. C. Baker of the University of Illinois, twenty-six species of the fresh water shells and ten species of the marine shells have been found at Cahokia. The amount of shell in the collection is not complete but fairly representative.

Bone is found primarily in the form of awls and needles. Most of them are made of slivers from the long bones of animals, a few from the leg and wing bones of the larger birds, and several from the heel of the deer. A few bone beads and a few arrowpoints made of antler tips are found. There are fourteen awls and one bead of bone and three points of antler in the collection. Grooved sandstone pieces up to the size of a fist are numerous. They are irregular and the grooves are irregularly placed and vary in depth. They are thought to be sharpening stones for the bone implements.

Artifacts of hematite and copper are quite rare but have been reported. No banner stones or plumb bobs have been found to my knowledge, but we have found one boatstone from the group and one birdstone and half of another were found together near the small group of mounds to the north and are owned by Mr. Wm. L. Waters of Godfrey, Illinois.

There is one ornament in the collection that is quite interesting. It is in the form of a small, pot-bellied owl made of pottery, one and one-eighth inches high with incised lines to represent the wings on each side of the body and with a hole drilled completely through the head, the openings of the hole representing the eyes. It is in all probability a bead. Three other pieces of this type are on record: one of pottery and two of stone. The one of pottery is considerably larger and the two of stone are about the same size, the chief difference being that the wings of all three are in relief.

Except for the arrowheads, the number of pieces in the different groups is not sufficiently large to determine any reliable percentage of occurrence. The arrowhead group is fairly large and the percentages of the different types are probably more or less dependable.

Similar type artifacts, especially those of flint, are found as far south in the Mississippi Valley as the southern states and as far north as the Aztalan Mound Group in Wisconsin. The origin of the people who manufactured these objects is yet to be determined but, from all the evidence at Cahokia, they were no doubt in this one place for a long time.

The burial ground has not as yet been located. Some of the mounds contain burials and others do not. Since the site is on low ground and the Mississippi River has no doubt shifted from the south to the north of it, the main burial grounds may be covered over by several feet of new land formed by the overflow. The total number of skeletons that has been found by all parties and expeditions to date is nowhere near proportionate to the number of people that must have inhabited the area. Occasionally, where the plowing has been extra deep, a portion of a skeleton has been brought to the surface. Upon excavating the remaining portion, the bones are found to be soft, badly decayed and broken. Practically all the skeletons are extended on the back with no definite relation to the points of the compass. A few sherds, all from the same pot, are sometimes found and on one occasion a seven-inch knife was found. Some of the expeditions have been more successful in finding complete pots or sufficient sherds from one pot to make a restoration.

The most striking feature to any one interested is the large amount of broken material, the large number of flint chips, and the large area over which they are scattered. Naturally, there are smaller areas throughout the large area in which the material is more profuse, but numerous artifacts are found between these smaller areas. The land has been under cultivation for eighty years or more and the number of broken pieces is no doubt due to the plowing and to breakage while still in use by the original owners.

The gathering of this material has been very interesting, and it is hoped that the collection will prove of some value to the science of archeology. The University of Illinois spent portions of the seasons of 1930 and 1931 in excavating two of the mounds and obtained some interesting artifacts and valuable information. May they soon be able to resume their work and solve the problems of Cahokia on a scientific basis.

COPPER SPEARPOINTS FROM REEDSBURG, WISCONSIN DELLS

Milton F. Hulburt

Distribution of copper artifacts in Sauk County, Wisconsin, and adjacent lands, has been widespread. Previous archeological reports record no concentrated areas, but a few scattered finds throughout the county. With special attention given to copper, I find that there are a number of unrecorded specimens, while others have drifted away into the hands of unknown collectors. Five of the coppers described herein were found within a radius of ten miles of Reedsburg, and the other three coppers north of Wisconsin Dells (Kilbourn) near the Wisconsin River.

While plowing his field (S E $\frac{1}{4}$ of N E $\frac{1}{4}$, Sec. 22, T12N R4E, Reedsburg Twp., Sauk County) in 1925, Mr. Harris Thorne brought to the surface, about a foot apart, two copper spearpoints (frontispiece, a-b). Coincident with this, a skull resembling that of a dog was found nearby. Flint arrowpoints are found on the field from time to time but are not numerous. The site is located at the head of a shallow ravine (possible springhead) on the upland separating the Baraboo River and Narrows Creek basins. Topography suggests a hunting site, rather than that of a permanent residence. Descriptions: (a) Over-all, $5\frac{1}{2}$ inches. Blade, $3\frac{1}{2} \times 1\frac{1}{8}$ inches. Taper Socket, 2 inches, perforated, curved back. (b) Over-all, 5 inches. Blade, $3\frac{1}{4} \times 1\frac{1}{2}$ inches. Taper Socket, $1\frac{3}{4}$ inches, perforated, curved back.

The second site is located on the "Old Pinery" Indian Trail, which was much used by the early white settlers and lead to the Big Creek country, the scene of early white pine lumber activities. On a small rise of ground, west of Twin Creek and south of the road (N E $\frac{1}{4}$ of S W $\frac{1}{4}$, Sec. 29, T13N R4E, Winfield Twp., Sauk County) some years ago, Mr. August Menchoff plowed up a copper spearpoint (frontispiece, c). This field has yielded a large number of perfect flint and quartzite artifacts and some workshop material. Across the road to the north and on the south side of the hill (S E $\frac{1}{4}$ N W $\frac{1}{4}$, Sec. 29) are several depressions, the

remains of earth lodges which, according to Mr. Menchoff, were used by the Winnebago in pioneer days. A copper spearpoint and celt were found about a mile east on the same trail, but their whereabouts are now unknown. Description: Over-all, $4\frac{1}{4}$ inches. Blade, $2\frac{1}{2} \times \frac{3}{4}$ inches, ridged back. Taper Socket, $1\frac{3}{4}$ inches, ridged back, slant sides.

In 1932 the writer purchased a copper (frontispiece, d) from Mr. Herman Knippel, Wisconsin Dells (member of the Society) who in turn had acquired the copper from a local resident. It was found seven or eight miles north of Wisconsin Dells (Kilbourn) in the region of Stand Rock (Juneau County) near the Wisconsin River. Description: Over-all, 6 inches. Blade, $4 \times \frac{7}{8}$ inches, ridged back. Straight socket, 2 inches, curved ridged back, slant sides.

All of the above described coppers are in the collection of the writer, who is indebted to each of the owners of the following described copper spearpoints and knife. The coppers were loaned for photography, and the pictures, together with descriptive information and the site of discovery, now become a matter of permanent record.

In the fall of 1931, Arthur E. Kelley, Reedsburg, Wisconsin, found a spearpoint exposed in a cornfield on the west bank of the Wisconsin River, in Lyndon Twp., Juneau County, seven or eight miles north of Wisconsin Dells in the Region of Stand Rock (frontispiece, f). A section description is not obtainable. According to Mr. Herman Knippel of Wisconsin Dells, a number of coppers have been found in this area and these are now in his private collection. Description: Over-all, $6\frac{1}{2}$ inches. Blade ridged, $4\frac{1}{2} \times 1\frac{1}{4}$ inches. Socketed 2 inches, flat back.

On the east bank of the Wisconsin River in the vicinity of Plainville, Dells Prairie Twp., Adams County, Mr. Merriwell Huebing of Reedsburg, Wisconsin, in 1932, found a copper knife exposed in a cultivated field. The knife has a curved blade, sharpened on one edge only (frontispiece, e). Flint and stone implements are frequently found on this field. Description: Over-all, $6\frac{1}{4}$ inches. Blade curved, $4\frac{1}{2} \times \frac{3}{4}$ inches. Tang, flat rat-tailed, $1\frac{3}{4}$ inches.

About thirty years ago, Mr. Fred Maske, now a resident of Reedsburg, picked up a copper spearpoint (frontispiece, g) on his farm, W $\frac{1}{2}$ of N E $\frac{1}{4}$, Sec. 7, T13N R5E, Dellona

Twp., Sauk County. The copper shows either great age or else unfavorable soil conditions for its preservation. Mr. Maske states that stone implements, arrowheads and spearpoints were frequently picked up on this field. Dell Creek drains this region and joins the Wisconsin River at the Lower Dells. In the Wisconsin Archeologist, Vol. 1, No. 3, August, 1922, "Western Sauk County", are described interesting mound groups in Dellona Township in this immediate vicinity. Description: Over-all, $5\frac{3}{4}$ inches. Blade, $4 \times 5\frac{5}{8}$ inches. Taper Socket, $1\frac{3}{4}$ inches, flat back, straight sides.

A copper spearpoint, picked up on his farm by Mr. Geo. Seamans of Reedsburg, Wisconsin,*Sec. 28, T12N R3E, Iron-ton Twp., Sauk County, is very interesting (frontispiece, h). Either in the original making or the repair, an additional piece was welded or bonded to make the blade complete. The site lies in the western uplands of Sauk County where deer, bear and small game were plentiful. The trail leading to the south to the Shot Tower at Helena (Spring Green) crosses near here. Description: Over-all, $4\frac{1}{4}$ inches. Blade (Weld or Bond) $2\frac{1}{2} \times 1\frac{1}{8}$ inches, triangular and ridged. Taper socket, $1\frac{3}{4}$ inches, flat back, ridged.

AN UNUSUAL SPIRIT STONE

M. S. Thomson

One day, in August, 1931, my father and I were looking for relics along the east bank of Rock River a short distance above Indian Ford. To be more exact, it was about half a mile upstream from the Southworth Farm village site as described by Charles E. Brown in the report of the Logan Survey of 1928.

As the main camp site was in pasture, it was decided that it was useless looking for anything there, so we followed the edge of the river for there we had often found implements washed out of the banks. Although there are no plowed fields close to the river at this point, relics are often washed out of the banks or turned up by pigs rooting in the edge of the woods. Two such places in that vicinity show considerable indications of aboriginal occupation. The soil to a depth of about a foot is filled with flint chips, arrows, and workshop debris, and after a hard rain a few arrows or other artifacts can usually be found. Oftentimes we have found them at the edge of the river.

It happened that my father was walking near the place just mentioned while I was searching the bank higher up. He called me to come and look at something he had picked up in the water. As I walked down the bank I stepped over a large stone lying partly buried in the mud and nearly overgrown with weeds. A deep groove in the stone attracted my attention, although at first glance it appeared to be just a weathered granite boulder. Pushing aside the weeds that partly covered it, I immediately saw that such was not the case. The groove was too regular and the material of which the boulder was composed too uniform for it to be the result of natural weathering. We turned the stone over and were surprised to find that the grooving was almost identical on the opposite side (figure 3).

We rolled it up the bank and left it on the flat until we finished searching the bank where we picked up three more arrows. I managed to maneuver my car down through the fields and woods to the spot where we were able to get the stone in and thus we transported it home.

It is a gray granite boulder about 22 by 14 by 18 inches and weighs approximately 250 pounds. It is perfectly flat on the bottom, and rounded or dome-shaped on top. It has been carved out to a depth of two to three inches in such a way that the original surface is left in a raised band running over the top and joining the base on both sides, while another band goes around the center horizontally and intersects the vertical one. All parts which stand out are in their natural condition, showing the effect of glacial polishing on the original boulder.

What the exact purpose of such a piece was, of course, no one can say. About the only logical classification would be a ceremonial stone or perhaps a spirit stone. Whatever its purpose was, it is a very unusual specimen. I have been unable so far to find a record of a spirit stone which has been artificially carved out. Ordinarily they are peculiarly weathered rocks known to have been used as such by the Indians, through legends connected with them. Here then is something with a different sort of a pedigree.

I recently brought the stone to Sheboygan from Janesville, where it has been since it was found. It occupies a spot on the lawn near the front door which Mr. McKern contends is a poor place, since I shall have to make a tobacco offering every time I pass it.



Fig. 3. Artificially carved stone from the Rock River.

ARCHEOLOGICAL NOTES

Meetings

A meeting of the Wisconsin Archeological Society was held in the Trustees' Room of the Milwaukee Public Museum on the evening of May 15, 1933. There was a good attendance of members and visitors. Secretary Charles E. Brown presented a brief report of the meeting of the Executive Board held at Hotel Aberdeen earlier in the evening. He stated that a State Committee had been appointed by the Legislature to consider plans for an appropriate celebration of the three hundredth anniversary in 1934 of the landfall of the first white man on the shores of Green Bay in Wisconsin. Organizations of every kind were requested to assist in the celebration.

President W. C. McKern requested that all members of the Society assist in field work in the state during the summer months. Miss Rachel Mary Campbell announced the organization of the Society for the Preservation of Wisconsin Indian Life and presented a report of the business transacted at its first meeting.

Eldon G. Wolff, a member of the staff of the local museum, gave a lecture on the subject of "North American Weapons", which he illustrated with typical specimens drawn from the museum's extensive collection of these. Among these were Indian and Eskimo bows, matchlocks, wheellocks, flintlocks, the blunderbuss, Highland pistol, Brown Bess musket, Kentucky rifle, Indian rifle and the Winchester. This lecture was greatly appreciated and many questions were replied to by the speaker after its close.

At the close of the meeting William K. Andrew, a Milwaukee member, exhibited an Indian trade axe, a tomahawk pipe and four native copper points.

During the six weeks of the summer session of the University of Wisconsin, extending from the first week in July to the second week in August, folklore programs were presented at sunset on the lake shore terrace of the University Memorial Union by members of the Wisconsin Folklore Society. The folklore tales and legends presented on these occasions consisted this summer of "Lake Mendota Indian Legends", "Paul Bunyan Tales", "Gypsy Tales", "Museum Lore", "Ridgeway Ghost Tales" and "Wisconsin Lost Treasure Tales". Quite large audiences were present at every meeting. Lantern slides illustrating the various subjects were shown after dark and folklore literature was distributed. Charles H. Hocking, Miss Alice Vinje, Jas. J. McDonald, Charles E. Brown and other members of the Society assisted in the story-tellings. With the opening of the fall semester of the University the Society will again hold regular indoor meetings.

Publications

Owen Lattimore gives an interesting account of a short stay amongst the Gold tribe, a Tungusic group of north Manchuria, in a recent paper published as Memoir 40, Amer. Anthropol. Assoc., 1933. Price, 80 cents.

Another discovery of a Folsom type of projectile point associated with the bones of extinct fauna, in this instance a mammoth, at a

site near Dent, Colorado, is described and discussed by J. D. Figgins in: *A Further Contribution to the Antiquity of Man in America*, Proceedings of the Colorado Museum of Natural History, v. 12, No. 2, August, 1933.

A well illustrated account of the discovery of a Hopewell type of pottery in Louisiana is given by Frank M. Setzler in: *Pottery of the Hopewell Type in Louisiana*, publ. No. 2963, from Proceedings U. S. Natl. Mus., v. 82, Art. 22, Washington, 1933.

A recent paper by Benjamin L. Whorf: *The Phonetic Value of Certain Characters in Maya Writing*, Peabody Museum of American Archeol. and Ethnol., Harvard Univ. Papers, v. 13, No. 2, 1933, discusses a possible key for solving the secrets of Maya writing.

Woldemar Jochelsen is the author of a recently published bulletin covering the Yakut of eastern Siberia and their culture. This detailed, well illustrated contribution to a little known subject is entitled: *The Yakut*, Anthropol. Papers, Amer. Mus. Natl. Hist., v. 33, Pt. 2, New York, 1933.

Miscellaneous

A number of anthropological exhibits at the Century of Progress Exposition will prove of interest to those visiting the fair. Perhaps the most interesting of these, located in one car of the Mexican Presidential Train, is a display of archeological materials secured from recent excavations conducted at the Monte Alban ruins in southern Mexico, under the capable direction of Dr. Alfonso Caso, Director of the National Museum of Archaeology of Mexico. The exhibit, including a great variety of artifacts in shell, pearls, bone, obsidian, jade crystal, jet, turquoise, amber, copper and gold, illustrating a complex artistic and material-culture development, provides an insight into the highly advanced cultures of the prehistoric Mixtecs and the more ancient Zapotecs. Other exhibits at the fair include a Maya building containing displays illustrating various American Indian groups, and village groups of Winnebago, Sioux, Navaho, Hopi and Nootka Indians who engage in dancing performances in an adjacent arena.

Dr. E. L. Miloslavich, Milwaukee, formerly Associate Professor of Pathological Anatomy at the University of Vienna, Austria, and later Professor of Pathology at Marquette University, Milwaukee, and Director of the Department of Pathology and Bacteriology at said University, was nominated by His Majesty King Alexander I of Yugoslavia as Professor of Legal Medicine and Director of the Medico-legal Institute at the Royal University, Zagreb, for which position he is soon departing from America.

Nocturnal Archeological Studies

Wilton E. Erdman

Spring had come and fields were ripe,
For a jaunt looking for artifacts.
So I started my car, lit up my pipe,
And grabbed some boxes and sacks.

I went out on a turned-up field;
Scanned the surface bit by bit.
Many arrowpoints did it yield;
I wondered whom they had hit.

I found a wonderful hammerstone,
With its edges battered and pitted.
Had its maker fashioned it alone;
And into what hands had it fitted?

I found an excellent knife,
With a very fine cutting edge.
For scalping the wily White,
Indians didn't use any sledge.

I found a very beautiful drill,
And a gorget with a nice round hole.
What patience it took to sit still,
Revolving a shaft for some goal.

I discovered an ancient celt,
With a blade as keen as steel.
I wondered how an enemy felt,
If it lodged in his head or keel.

I found some potsherds lying loose,
Which once had made a pot.
I wondered if it had cooked a goose,
And all such tommy-rot.

I found handfuls of shell and bone,
Showing where there was a refuse pit.
What wild feasts they could bemoan,
If they only had tongues to remit.

A copper spear now came to light,
Revealing a close battle here.
It probably was lost in the fight;
I began to tremble with fear.

A fluted ax next lay exposed;
My heart went thumpety thump.
How long had it here reposed?
It had seen many a slump.

I found a remarkable birdstone,
Which is considered quite rare.
Mr. Ringeisen* would surely telephone,
A "silver crowbar"† would be my share.

I dreamed and rambled on and on,
As these thoughts flitted into my mind.
What struggles were hidden here and yon;
Was nature harsh or kind?

I met a farmer with a gun,
He asked what I was doing there.
I told him I was out for fun;
He told me to vanish in the air.

I picked up each and every relic,
And threw them fast into the car.
I stepped on the accelerator quick,
And shot hither, thither, and afar.

After so many hallucinations,
I sat straight up in bed.
Shaking off these imaginations,
I knew I had been out of my head.

Yet with all this hectic dreaming,
I realized that some of it was true.
It takes one from worldly scheming,
To a place where life begins anew.

Archeology grips you much like a disease,
When its mystery once gets into your veins.
You may travel far o'er land and seas,
But you can't get loose from its reins.

* Mr. Jos. Ringelsen has the largest collection of Wisconsin birdstones existing in either public or private collections, possessing 27 out of 69 specimens so far found in this state. Wis. Arch. Vol. 11, No. 2, pp. 35-40.

† Mr. Ringelsen "prys them loose with a silver crowbar". Wis. Arch. Vol. 11, No. 2, p. 37.

The Wisconsin Archeologist

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NEW SERIES

No. 2



PUBLISHED QUARTERLY BY THE
WISCONSIN ARCHEOLOGICAL SOCIETY
MILWAUKEE

Accepted for mailing at special rate of postage provided for in Sec. 1103
Act, Oct. 3, 1917. Authorized Jan. 28, 1921.

WISCONSIN ARCHEOLOGICAL SOCIETY

The Society is a state department, receiving a part of its support from the state. Its funds are under state control. Its work is well and widely known. It has received the approval of leading American archeologists, who agree that it deserves the full support of all Wisconsin citizens interested in the state's archeological history.

The Society's activities comprise the location, recording, investigating and preservation of Wisconsin Indian remains, folklore and history, all of which are rapidly disappearing and must be recorded and saved immediately if ever.

Through its efforts many fine groups of Indian earthworks and other aboriginal monuments and remains have been permanently preserved to the public. Most have been marked with descriptive metal tablets. Others are being protected. Surveys and explorations have been conducted in many sections of the state.

It is also engaged in encouraging the establishment of public museums and collections and in discouraging the manufacture and sale of fraudulent antiquities.

Regular monthly meetings of the Society are held during the months September to May, inclusive, in the Trustees' Room of the Milwaukee Public Museum. Meetings are open to the public. No regular meetings are held during the months June to August, inclusive. Special field meetings are occasionally held during the vacation months.

The results of its research and other activities are made known through its regular quarterly publication, *The Wisconsin Archeologist*. Thirty volumes have appeared. The Society has a large membership distributed through every part of the state.

It is co-operating to the fullest extent with all of the various scientific and educational organizations and institutions of Wisconsin.

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Wisconsin Archeological Society

Milwaukee, Wisconsin

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and preservation of Wisconsin antiquities

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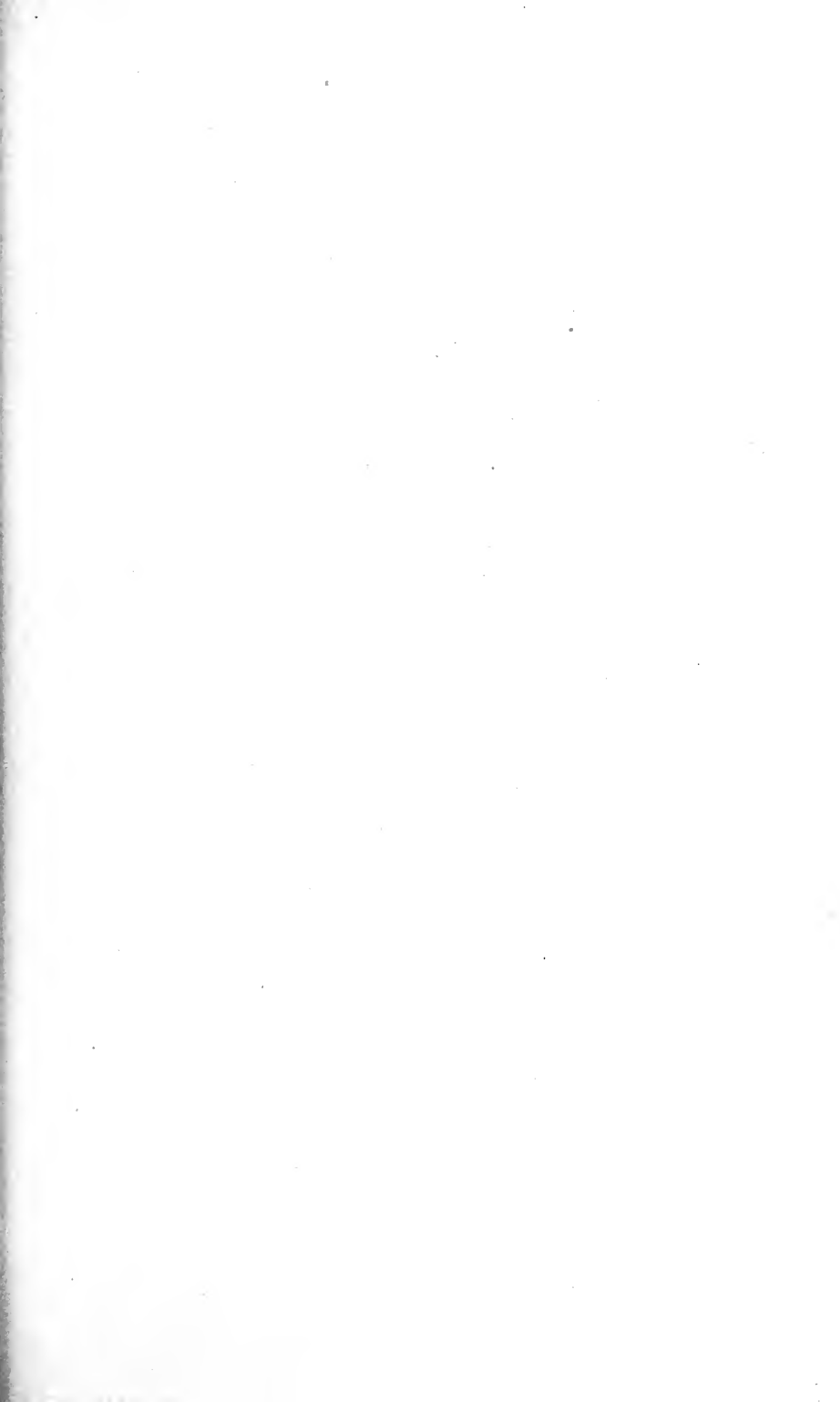
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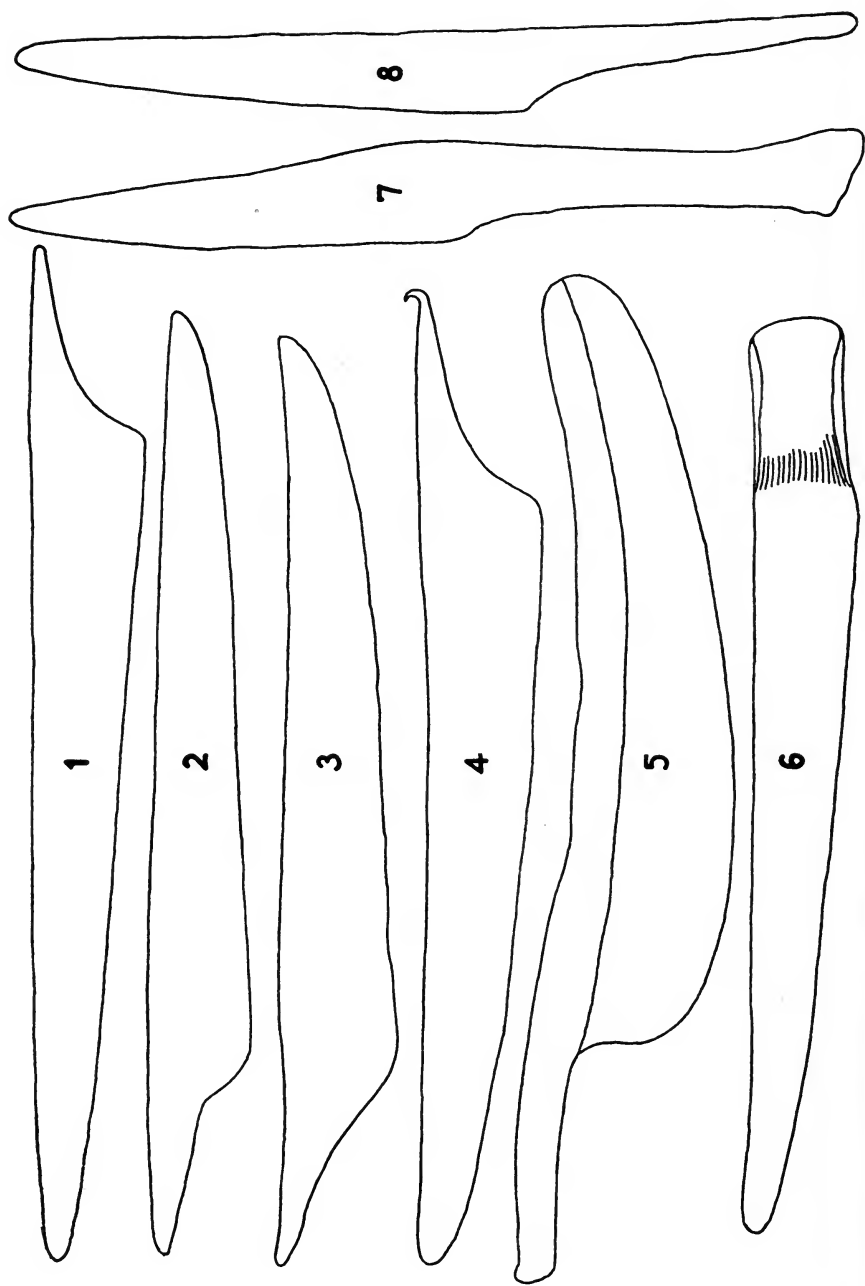
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KENTUCKY'S "ANCIENT BURIED CITY"

T. M. N. Lewis

Situated at the confluence of the Mississippi and Ohio Rivers is the little village of Wickliffe, Ky. Here, in the late summer and fall of 1932, a staff of archeologists excavated portions of a prehistoric village site which has since become known to the public as the "Ancient Buried City". Obviously the term "city" is a misnomer insofar as modern standards are concerned. Comparatively speaking, however, this aboriginal village probably maintained as influential a role in those prehistoric days as do any of our modern cities of 100,000 population. That the site was not merely a temporary abiding place for some nomadic tribe is assumed from the fact that the camp refuse extends to a depth of from three to five feet over the entire site. The abnormally high bluff at this location afforded a point of vantage from which it was possible to survey a great expanse of land and water. This was a topographical feature seldom overlooked by the ancients in their quest of permanent sites for habitation.

In the summer of 1932, Fain W. King of Paducah, Ky., an amateur archeologist, investigated the site. The interesting nature of the earthworks and the apparent long period during which the site had been occupied, as determined by numerous test pits which were made, prompted him, as a member of the Board of Regents of the Alabama Museum of Natural History, to solicit the aid of Dr. Walter B. Jones and his staff. To shelter the excavators from the weather a circus tent was pitched over that portion of the site which was staked out for excavation. The work continued incessantly seven days a week until the approach of winter. All remains were left in situ with the exception of that portion

of the pottery which was encountered in a broken condition and which was later replaced in original positions after restoration. In all, excavations were made in three mounds. The work was so intelligently performed and the remains of such an interesting character that Mr. King decided to have substantial buildings constructed over each one of the three excavations, withdraw from his several Paducah business connections and devote his entire time toward making this an educational project for the public. To recover his investment in land and buildings a nominal admission charge has been asked of all visitors. Obviously the overhead expenses have been small and it is expected that sufficient funds will have been accumulated by the summer of 1934 to further the excavations. A description of the evidence thus far uncovered follows.

Topographically speaking the earthwork which covers the burial grounds is not a prominent one. From its greatest elevation to the original ground surface the depth is not more than four feet. This conforms with other burial sites we have investigated in the Middle Mississippi Valley region. Our own observations and those of other investigators would seem to point out that the monumental mounds were erected over important structures just prior to evacuation of the site. This entire region abounds in enormous truncated and conical mounds forty and fifty feet in height and as much as two hundred feet in diameter. In close proximity to these mound groups, which contain anywhere from one to four mounds as far as our observations have extended, burial grounds can generally be located.

In that portion of the burial grounds which has thus far been excavated at Wickliffe, one hundred and fifty-three burials have been exposed. Here one observes that on the average these people were rather short in stature as compared to our present racial standards. Furthermore, longevity seems to be the exception, there being but one individual present who might have exceeded the age of seventy. Small mastoid processes, well-rounded angles of the mandible and an almost complete absence of supraorbital ridges designate the remains to be those of a woman. All of her teeth had been lost for sometime prior to death as is apparent from the condition of the alveoli or teeth sockets which had filled

entirely with bone. Still another age indication is the partial eradication of the cranial sutures.

Further observations disclose that the bodies were placed on the ground rather than in it. The black burial pits, so frequently encountered in Wisconsin mounds, were entirely lacking. Only the surface soil was scraped away for the body which was then covered with soil to a depth of a foot or two. Layers of charcoal are to be seen under some of the burials and in such close association as to cause one to wonder if the corpse had not been placed directly upon a fire or bed of hot coals. All the soil in the burial grounds is intermixed with charcoal which is a fortunate circumstance in that it has served to neutralize the acid condition of the soil, resulting in a remarkable preservation of the skeletal material. In one section of the excavation may be seen as many as five superimposed burials, the nethermost being in a better state of preservation than the uppermost. Greater exposure to moisture and freezing temperatures and the shallow burrowing of rodents in the case of the uppermost burials offers a satisfactory explanation for this phenomenon.

Noteworthy are the three distinct modes of interment of which the most common is the fully extended, natural flesh burial. There are also present several good examples of bundle and crematory burials. To encounter all three types of interment in one burial site is, in our experience, a rather uncommon circumstance, at least in that region.

Centrally located, with respect to the mound, lie the remains of a male with what is apparently a skull trophy at his feet. In life he wore two large ear-rings carved from wood and plated with beaten copper—perhaps insignia denoting his elevated rank. These rings encircle seven-pointed stars and the whole has been nicely preserved by the metallic salts resulting from the carbonization of the copper.

In another section lie the remains of a potter with her tools at her head. These consist of five mushroom shaped trowels made of pottery clay and two polished rubbing stones. Inasmuch as no other tools were found it is assumed that these comprised the equipment used by the aboriginal potters of that region. A noteworthy fact is the abnormally large percentage of the effigy type of vessels in contrast to

the customary greater percentage of inferior utilitarian type of earthenware generally encountered in burial sites of this region. There is little repetition of design and no specimen which could be classified as asymmetrical in shape. One of the most artistic pieces is a painted water bottle formed in the shape of an owl. It rests on the two feet and the tip of the tail. An illustration of this specimen accompanies this article. Two other noteworthy pieces are a bowl with a plumed eagle head projecting from the rim and a vessel wrought in the manner of a seated human female.

Numerous artifacts of mica, hematite, fluorite, lead, copper, cannel coal, marine shells, bone and stone were found in close association with the burials. This is indicative of the far-flung contacts which these people had. It has been pretty well established that the aborigines obtained their mica from the mines of North Carolina and their copper from the Lake Superior district. In all probability the lead originated in the Joplin, Mo., district and, of course, the marine shells had their origin in the Gulf of Mexico. Fluorite mines are to be found a short distance up the Ohio River and hematite in southern Missouri.

In another mound located at the edge of the bluff a large, rectangular excavation was made. Five feet below the top a hard clay floor was encountered. This was covered with the charred remains of a burnt structure. These remains consisted of portions of the thatched roof with its supporting timbers and the fallen timbers which once formed the walls. When the charred material was removed, three rectangular, convex ceremonial altars were exposed, indicating that in all probability this burnt structure had served as a temple building. These altars are of burnt clay and are all three in juxtaposition. Between two of the altars are seen two post molds. A charred post lying on the floor adjacent to one of these molds had secured to it a braided rope about a half inch in diameter. Parallel to these altars, at a distance of four feet, is a row of post molds indicating what may have been the front wall of the building. Another row of molds may be seen immediately in front of the altars and parallel to the wall. These molds may have held the upright supports for a rail before which the suppliants knelt and offered their sacrifices as they filed into the temple.

Inasmuch as the number three was not held to be of any particular significance by primitive American peoples, we are inclined to believe that further excavation will reveal a fourth altar inasmuch as the number four is known to have had some mysterious interpretation. Perhaps each one of these altars was dedicated to the worship of some one deity; on them burnt offerings were made according to the religious custom of many ancient peoples. These offerings may have consisted of food, tobacco, clothing, articles of adornment and even living animal sacrifices bound to the altar by means of the above mentioned rope. These rituals may have been conducted by a priest or shaman. The objects for which offerings were made were as manifold as the desires of the supplicants.

Since this floor was encountered at a depth of but five feet below the top of the mound, the excavators reasoned that additional remains would be found beneath. Accordingly a section of this floor of hard clay was removed and the excavation continued to a depth of five more feet. Here again a hard clay floor was encountered completely covered with the charred remains of another burnt structure. As in the case of the superimposed structure, the excavators encountered an uneven layer of burnt clay resting upon the charred timbers. This burnt clay does not appear to have been wattling which had been applied to the walls of the structure, but rather appears to have been loose clay which was dumped upon the collapsed timbers while they were still aflame. The fact that sections of the thatched roofs of both structures were found in a good state of preservation would seem to indicate that the roof had been reinforced with wattling at the time it was constructed. The presence of this clay wattling prevented the thatching from being entirely consumed before the building collapsed. Further evidence in support of this latter deduction was the discovery of some of this wattle work in close association to the thatching. The heaping on of clay immediately following the collapse of the structure smothered the burning timbers and converted the mass into charcoal, thus making it possible to offer these interpretations.

It seems probable that the lower structure was burnt intentionally. Had it been an accidental burning, one would

assume that they would have removed the ashes and rebuilt the structure. On the contrary, a mound of clay five feet in height was thrown up over the remains. Now if we have read the evidence correctly, we are obliged to assume that the burning was premeditated. Just exactly what the motive was is impossible to say. A fire pit, which may have contained a perpetual fire, was found just beyond the wall of both structures. In Central America perpetual fires were renewed every fifty-two years. Some similar rite may have been practiced here accompanied by the burning of their temple. Other Indian tribes had the custom of burning the dwelling of the deceased. Perhaps here this was done to destroy the evil spirit which had caused the death of their priest or shaman. Still another motive may have been their eagerness to placate an angered god who had invoked some catastrophe upon them.

When every remnant of the lower structure had been covered to a depth of five feet, these people again reconstructed their temple immediately, or nearly so, over their former one. Here again is mute evidence of a deliberate burning, and again the remains were covered to a depth of five feet. No evidence was found on the top of this mound in the nature of post molds that a third temple was erected. Possibly upon completing this earthwork the populace decided to erect mounds over their more important structures and evacuate the site in order to flee from some curse which they believed hung over them.

It is to be understood, of course, that such deductions as herein rendered are purely imaginative, but at the same time they are offered in the light of recordings made by early historians who observed the odd religious fantasies practiced by the descendants of these earlier people. We do not wish to appear to have been bred in the school of exaggeration. Our imagination has been employed in an effort to fill in the gaps of what might be otherwise regarded by some as a rather meaningless record of prehistoric evidence.

The third earthwork to be uncovered brought to light the post mold outlines of another structure. This was encountered eight feet below the top of the mound. Since this structure was not burnt, no carbonized remains were present. Nothing whatsoever remained but the void post molds

that once contained the vertical posts which supported the roof and formed the walls. These molds are from four to ten inches apart and the posts that fitted in them varied from three to six or eight inches in diameter. The structure was rectangular in shape, measuring twenty-one by twenty-five feet. Other post molds are present within the area of the structure and probably contained supports for furniture and additional supports for the roof. Also within the area are three fireplaces still containing white ashes. A gap in the wall is indicative of a doorway. A number of earthenware vessels, several of which are painted red on the inside, were found on the floor adjacent to a quarter of a bushel of charred maize cobs and a turkey call made from the leg of the wild turkey. The whole arrangement suggests the possibility that this may have served as the chief's dwelling. The remains of a meal of maize, the presence of both ornamental and utilitarian earthenware vessels, the turkey call and several bone implements offer grounds for this assumption.

The extent of the excavations thus far completed present a fascinating picture of prehistoric culture. We have every confidence that Mr. King will continue to conduct this project along ethical lines and that it will continue to awaken an interest in America's early inhabitants on the part of the many visitors who inspect these remains. The importance of scientific procedure performed by trained men is forcefully presented at the close of each lecture. Visitors are urged to exert every possible pressure to discourage the depredations of prehistoric sites by the untrained relic-hunter. And finally here is a profusely illustrated and verbally described record of prehistoric civilization from which the average layman is enabled to absorb more information than he would from several volumes which he probably would not read anyway!

LARGE NATIVE COPPER KNIVES

Ralph Guentzel

The purpose of this paper is to call attention to ten or twelve of the very largest knives in the state collection and to any other specimens worthy of note in other collections, and to consider the possible manner of their use. Wisconsin can justly be proud of, and is indeed fortunate in having the recognized largest collection of Indian native copper implements in the United States. There are in the collection of the Wisconsin Historical Museum one hundred and twenty-five knives made of native Lake Superior copper. One hundred of these are in the Henry P. Hamilton collection; the other twenty-five are largely included in the Frederick S. Perkins collection acquired by the State Historical Society in about 1870 through purchase from its owner, then the leading Wisconsin collector of Indian artifacts of all kinds of materials such as clay, stone, bone, antler, steel, horn, copper, hematite, and lead.

These native copper knives of Wisconsin are separated by archaeologists into four classes, all well marked and classified by certain characteristics:

1. Knives with straight blades and a more or less pointed tang (frontispiece, 1-4, 8).
2. Knives provided with a handle (frontispiece, 7).
3. Knives with curved blades (frontispiece, 5).
4. Knives provided with a socket (frontispiece, 6).

The knives with straight blades and pointed tangs are by far the most common class of native copper knives. Of knives provided with a handle, formed by an extension of the blade, there are but two examples in the state collection and not more than one or two in several other Wisconsin collections. They are very rare. Of knives with distinct curved blades there are but three in the state collection. These also are of rare occurrence. The state collection contains thirteen examples of knives furnished with a socket. Twelve of these have a rivet-hole in the socket by means of which they could be fastened to a wooden handle with a copper rivet.

The knives in the state collection are of all sizes, from very small to quite large. The smallest is exactly 1 inch long and the largest $12\frac{7}{8}$ inches in length, the average length being from 5 to 6 inches. They weigh from less than a quarter of an ounce up to 6, 7 and 10 ounces.

Regarding the larger knives, we find that eight of these specimens are from $10\frac{5}{8}$ inches to $12\frac{7}{8}$ inches in length. All are really fine examples of aboriginal coppersmithing. All are, so far as can be determined, implements used by the prehistoric Indians of Wisconsin and all were collected from old Indian village and camp sites in our state. No larger specimens are known to be in any collection, public or private.

Of the straight-back blade knives there are in the collections of the Milwaukee Public Museum but two very large specimens. One comes from Fond du Lac County and measures $12\frac{1}{4}$ inches in length; the other, from Manitowoc County, is $9\frac{3}{4}$ inches long. A single large handled knife which comes from Washington County is 10 inches long. A single large socketed knife 9 inches long was obtained in Trempealeau County.

Other records of large native copper knives show six straight back knives measuring from $8\frac{1}{2}$ to 10 inches in length. These were found in Door, Ozaukee, Waukesha, Manitowoc and Price Counties. The blade of the Manitowoc County specimen is ornamented with transverse cuts.

Five large curved-blade knives measuring from $9\frac{1}{8}$ to $11\frac{3}{16}$ inches were collected in Winnebago, Shawano, Adams, Burnett and Sawyer Counties.

One socketed knife was obtained at Three Lakes, Wisconsin, and is 9 inches long. One handled knife 8 inches long was found at Kewaunee, Kewaunee County. Its blade is ornamented with punch marks, eight on one surface and four on the other.

The largest copper knife ever found was in Fulton Township, Gratiot County, Southern Michigan. This superb specimen of the straight-back type of copper knife is $13\frac{7}{8}$ inches long.

These very large prehistoric native copper knives were manufactured by the native Indian processes of hammering,

annealing, cutting and grinding pieces of the Lake Superior copper obtained from the ancient copper workings on the Kewaunee Peninsula, near Ontonagon and on Isle Royale in Northern Michigan. Copper was also obtained in Douglas County and from the glacial drift elsewhere in Wisconsin. It is an interesting fact, but one to be expected, that very few copper implements are found in the Driftless Area except in the graves of the Wisconsin variant of the Hopewell culture, and most of these are in the form of head and breast plates and ear spools.

As to the uses of these large copper knives, those having straight-back blades and equipped with handles of wood, bone, and sinew would make excellent weapons in hand to hand fighting, in killing large animals in hunting and in cutting up meats and perhaps vegetables. They would also be useful tools for cutting or smoothing in wood working for the metal can be ground to a surprisingly sharp cutting edge. The curved-blade knives would be more useful for domestic purposes in and about the camp and wigwam, and undoubtedly had handles of similar materials.

The socketed knives with rivet holes were evidently once fitted with wooden handles. In the case of the handled knives the handles were very probably wrapped with cloth, cord or sinew, or enclosed with pieces of wood, horn, antler or bone to protect the hand when they were in use. These knives could be employed for many uses and were undoubtedly used for fighting, hunting and domestic purposes.

**THE SOCIETY OF DREAMERS AND THE
O-GE-CHE-DAH, OR HEAD-MEN DANCE
OF THE BOIS FORT (OJIBWE) INDIANS
OF NETT LAKE, MINNESOTA**

Albert B. Reagan

The Society of Dreamers

Members of the Society of Dreamers were earnest religious enthusiasts. The writer is told that, many years ago, in conjunction with other religious societies of the band, they worked up quite a religious frenzy. At this time they killed all their dogs and prepared for the world to come to an end, which they believed would establish the Indian in his rights. They asserted that a big storm and whirlwind were to come upon the earth, out of which fire was to envelope and consume all but the Indians, who were to gather in certain designated places for protection. Then, in accordance with this belief, they gathered in the sacred spots as ordered by the chief men, and the most terrible storm came as predicted. The tops of the trees were whipped to the very ground, the rain fell in torrents and the "thunder birds" from the four quarters of the earth opened and shut their fiery angry eyes in the lightning flashes and flapped their powerful wings in the "thunder-noise" until the very earth trembled. But the end of time came not, and since then the society has waned.

The ceremony of this society is a form of dance, held in a circular inclosure of some fifty feet in diameter. The structure consists of a birch bark fence about three feet in height, around the interior of which are arranged barks and boards which are placed on the ground against the wall to serve as seats. At its western and eastern sides are spaces for entrance and exit. A center pole carries a flag at its top to show that the members are friends of the Great Father.

The day before the ceremony is to be held, the Chief of Ceremonies sends out four braves to carry the intelligence to all the members. On the day of the ceremonies all the participants march in at the western door, pass around on the

left hand and continue to their seats which are occupied according to their respective part in the ceremony. The peace pipe is lighted by the "pipe-man" and passed around four times. Guards are then stationed at the exits, after which no one is permitted to leave without permission of the chief of ceremonies, except the usher who is seated to the left of the braves. He may leave at any time, as he looks to supplying food and fuel and runs errands as requested. The "pipe-man" also has permission to leave whenever necessary. If an undesirable person enters, the drummer carries the drum out at the eastern entrance as a signal that the meeting has adjourned. After the completion of the ceremony, all depart from the western exit.

After the ceremonial smoke, one song or more is chanted, as a selected musician beats a large drum. The four braves then call upon the chief of ceremonies for a speech which he delivers in form of a prayer to the Great Spirit. This is followed by a circular dance to the left, which is kept up for several hours, some participants dancing and acting as though they were firing off guns, hunting, canoeing, and running hard. They also perform over the sick in the hypnotic way. As they thus perform and dance they lift their hands to the sky in prayer, holding their palms upward to receive the answers to their prayers which they "scatter" from their hands to the ground to show that they give what they receive. They then give presents to one another to show that they are all brothers and that brothers must help brothers.

They allege that the *Che Manito* (*Kisha Manito*) became displeased with the corrupt ceremonies of the Grand Medicine Lodge and gave this ceremony as a purer ritual. But facts seem to indicate that it was likely borrowed from the Sioux or some other tribe living to the south or westward of the confines of the Bois Fort Indians.

They have peculiar beliefs about the origin of this cult. One is that a virgin, who belonged to a tribe whose name could not be ascertained, was dead more than a week and, then, coming to life again, she brought a message direct to the Indians from the Great Spirit. She said that the *Che Manito* commanded the Indians to cease fighting each other, saying: "You must be honest and truthful. You must live

in peace with one another, stop your wars, and be friends of all mankind. Furthermore, I here command you to build me a religious house on sacred ground just like the round horizon-sky-line. Go there then, with a big drum, and sing, dance, and pray to me, as I command you. You are all my children and are brothers. Do these things and peace and happiness will be your lot."

The O-Ge-Che-Dah, Or Head-Men Dance

Occasionally the Bois Fort Indians, of Nett Lake, Minnesota, have a Head-man dance, called by them *O-ge-che-dah*. On October 5, 1912, the writer was advised that such a dance was in preparation in a thicket east of the village. Later the Indians gave him a special invitation to attend it, and as their Indian Agent, he accepted.

The inclosure in which the dance was held was about forty feet in diameter and had an open space at the south-east side for entrance and exit. It consisted of part canvas and part birch bark structure raised to about four feet in height, around the interior of which were placed boughs against the wall to serve as seats for the populace which was permitted to partake in the ceremony. A pole was also erected in the center of the inclosure on which was a crude carving of a bird. A flag, having the mass blue but having in its upper corner, near the pole, a red square in the center of which was an eight-cornered, white star, was also suspended from this pole. Then when all was ready, four special persons were informed by the chiefs of the coming dance and these carried the information to all the members, who are not many in number at this place. (The writer was told by the Indians that there had been only one other dance like this in twenty years and that was on a terrible stormy day the previous year and that but few attended it.) Thus was the whole of the 5th spent in preparation and in "sending out invitations". The dance began in the early morning of the 6th.

On this date, all the participants entered the circular inclosure and passed around on the left hand within the dancing area. After a moment's prayer they marched out again, still moving to the left. A sham battle was then fought,

apparently between the Sioux and Ojibwe, Head-man Andy Fields and other Indians representing the Sioux; Mr. Fields was wearing the full headdress of a Sioux warrior. The war whoop was given, guns were fired, and there was much shrieking and hallooing and a general mixture of terrible noises and a mixture of men (the women did not join in this ceremony), in all, indicating a bloody and horrible conflict.

Closing the war scene, the braves, joined by the women, marched back to the dance inclosure and entered it as before. A prayer was said, after which all seated themselves in the places designated for them, according to the part they were to play in the ceremonies. The leading medicine man then buried the ceremonial war hatchet. Next the "pipe man" arose and carefully lighted the ceremonial peace pipe, a huge pipe with stem three feet in length, all made of serpentine slate. After he had lighted it he turned it around in a pivotal motion as he held it horizontally to the earth, balanced over his left thumb and forefinger. As he thus turned it around slowly, he paused with it each time as the extended stem would swing to an inter-cardinal direction, beginning with the "northeast corner of the earth". As he thus paused each time he said a word of prayer. Four times he swung it to the entire "corners" of the earth. Then he passed it around to each Indian within the inclosure and each one, men, women, and children (and even the babies) took a whiff of the smoke. And thereafter at lull times in the dance it was performed with and passed around in the manner here mentioned.

After the first ceremonial smoke the dance began. It consisted of a crow-hop ceremony to a vigorous stamping dance, usually of the stationary type, though occasionally the actors danced to the left around the entire circular dancing space. For the most part, however, it seemed to be more of a jig dance of special members. Head Man Andy Fields, with his war bonnet, however, danced almost continuously. At intervals as the dance progressed speeches and prayers were made and the peace pipe was smoked as before.

The dance resembles the Dreamer dance of these Indians very much; but differs from it (1) in the fact that if any

one not a member of the order of Dreamers should enter the dancing arena, the dance ceremonies would at once terminate and the drummers would leave the dance area; while with the *O-ge-che-dah* all usually entered who wished and should an undesirable person enter who was not a member, the dance would only stop till that person was put out of the inclosure. (2) It is asserted that the *Che Manito* became enraged and angered because the practice of the medicine men of the Grand Medicine Lodge became corrupted and a purer service was organized in the Dreamer Society. With the *O-ge-che-dah* the chief medicine men of the Grand Medicine Lodge are the chief actors in it and the songs sung in it and in the Grand Medicine Lodge are the same or similar. (3) In the Dreamer Society a large drum is used; in the *O-ge-che-dah* several small tamborine-like drums, similar to those used in the moccasin game ceremonies, are used. (4) The Dreamers possess some very degenerate Christian theological "notions" and Christian ethics with a strange admixture of pagan ritual tending toward monolatry; the *O-ge-che-dah* is wholly pagan. (5) The Dreamers pray over the sick and dance around them to heal them; the writer has not learned that the *O-ge-che-dah* doctor the sick in any way. (6) One purpose of the Dreamer dance was to break up the old medicine dance and all such things; the *O-ge-che-dah* has no such purpose. (7) In the Dreamer dance the actors give presents to one another to show that they are all brothers and must help one another; in the *O-ge-che-dah* ceremony presents are given to the head men of the order because they stand between men and the manito and intercede for them.

And again the two dances are very similar in other respects. (1) The members of each are religious enthusiasts of the extreme fanatic type. (2) The actors in each dance lift their hands skyward in prayer as they wave trophies and medicine bags as gifts to the manito. Each group also hold their hands palms upward when receiving answers to their prayers. Furthermore, in each dance the actors scatter from their hands toward the ground to show that in answer to their prayers they give as they have received. (3) The ground in each place where the dance is held is considered holy ground. (4) Each ceremony teaches that all men are the children of the Great Father and each

teaches that one must be faithful to the teachings of the Manito. (5) Both dances begin with a sham battle (war dance) and each ends in a smoke of the pipe of peace. (6) Each has a flag, the purpose of which is to show that its members are friends of the Great Manito. (7) The purpose of the Dreamer Society is to make people prosperous and happy and at peace with the whole world; the *O-ge-che-dah* is a head man ceremony, also a peace and good will dance.

These were the special head men and head women of the occasion: Tenclaws, O. M. Benner, Jim Smith, Charles Strong, William Johnson, William Boney, Joe Canada, John Nett Lake, Mrs. Charles Farmer, Mrs. Stephen Benner, All Day, and O. M. Johnson; and these all received outing flannel and calico as presents from the other members of the society, except the last two mentioned, these receiving blankets instead of the outing flannel.

Below are appended notes on the dance of October 6th, taken as the dance progressed: Head Man Andy Fields, the chief singer, carried a tomahawk. Chief Moses Day held the stem of his pipe of peace in his right hand which he continued to wave as he danced. He also held a fox skin in his left hand, waving it skyward to the manito at every jesture point in the ceremony, as he yelled: "*Hay, yay, hi, ho.*" Tenclaws and wife each carried a pipe of peace. Stephen Benner, Jim Smith, and some others wore sleigh bells. All Day, who had his cheeks painted, danced a part of the time with a red "cane", with "scalloped" (rayed) feathers attached to the unlooped end. He also danced with an initiation arrow which was three feet in length and two inches in width which ended on its dart end with four tapering notches. Besides having a tassel of hair at its top end, this arrow also had a suspended tassel of feathers in its middle. O. M. Johnson, who had a martin skin lapel suspended from his arm, flashed a dirk knife with his right hand and brandished a war club with his left. Mrs. John Nett Lake danced with a gun. Charles Day wore a blue Canadian blanket; Charles Farmer and William Boney had green blankets; while Andy Fields, Jim Martin, and Susie Red Sack Nett Lake had red blankets. Andy Fields and Chief Moses Day had medicine headwear, Mr. Fields' being strictly a Sioux war bonnet. Andy Fields passed the

“*konahpamik*” shells around to the “pipe man” and to each medicine person. Then, in company with his wife, he prepared the large peace pipe and took it around the ring by the south to the “pipe man”. The latter then took it around the whole dance circle to each person within the inclosure. Then there were “two sings”, which were followed by the dog feast.

Following is the *O-ge-che-dah* song:

Stanza 1

W(h)ay-yah-ay-hah w(h)ay-ay-won-day w(h)ay|| w(h)ay|| o
Nen-go-shay kah-bay-mway-n|||dah-mahn
W(h)ay-yah-(h)-ay w(h)ay-yah-e-ho w(h)||ay-yah-ah ho e hay o¹

The meaning of the words that have an English equivalent are:

Nen go shay kah-bay-mway-n-dah-mahn
 To me calls thunder-bird.

Stanza 2

Yah-e-yah-hay w(h)ay-yah-hay w(h)yah-hay yah-o-hay hay|| o
Way-nah-day-me-go ooo o-ge-mah-wah-djiw (nearly chu'wh)
waaa

Way-eo-hay w(h)ay-o-ho w(h)ay o-he-hay-o.⁸

¹ The words, given to me by Mr. Farmer when he gave me the song, were written in the “French pronunciation” characters. Furthermore, he did not differentiate in the variation of the sound of the word he gave which the writer has rendered *w(h)ay-yah-ay-hah*. He gave it as “*We-ia-a*.” His writing is: “*Weiaa— weiaa weiaa-weiaa nin sha ka-bem-wida-man weiaa weia o*.” Some of the modifications are as follows: The “*w(h)ay||*” is prolonged here to an equivalent in time to the whole word, “*w(h)ay-yay-ay-hah*,” and the “*n||*” is a diminishing sound which approaches the sound of “d”.

⁸ Mr. Farmer gave the words to this stanza in his Chippewa way of writing, as follows: “*Aiae eae eae aoe me-nade-mego ooo oke-mawad-jiw weoe weoe weoieo weoo weoieo*,” which he pronounced according to the “French pronunciation”. However, there were some slight variations which he did not have. These the writer has indicated in his rendering of the spelling as follows: The “h” in parenthesis (h) means that the “h” is slightly pronounced. The “ooo” is a shortened connective “o” sound between the two words. They are distinct but uttered very quickly so as to make an almost continuous sound, but not quite. Several of the sounds are of the vanishing character. In addition, the sound of “hay” as the ultimate or practically the ultimate syllable (the “o” following it having a vanishing sound) is much prolonged. Especially is this true with the first line of the song. The “||” means a short rest; while a thus marked is short a.

The only part of the stanza with an English equivalent is:

<i>Wenademego</i>	<i>ooo ogemah</i>	<i>wahdjiw</i>
(it) to me coming from	chief	hill.

This stanza follows the previous one and means that the thunder bird is coming from the chief high point in the region to sing (to give him [the person for whom the song is sung] supernatural powers and "chieftain" ability).

Below is the chief medicine man's explanation of the dance: "The dance inclosure you saw had only one exit. This was due to the fact that the day was stormy and only one entrance was allowed for the purpose of keeping out the wind. Customarily, however, there are four entrances (and exits). The outer concentric circle of the dance inclosure represents the horizon. The bird on the pole in the center of the inclosure was blue, as was the pole on which it was sitting. The bird represents the thunderer, the thunder bird himself. When the wind gods cause it to cloud up, this bird causes it to rain. The flag on this center pole is the flag of the Great Spirit. It has an eight-pointed star in a red field which is an oblong in a blue field. It represents good and good will to men. The pipes are the pipes of the gods of the four winds. Sometimes all of the dancers smoke while dancing to appease the gods of the four winds. The staffs on which to hang drums, called *waganagebecheganan*, have four medicine bags suspended from each one. The pole with the many ribbons on it represents the medicine tree of the Great Spirit. Any one who wishes puts calico and other goods on this pole; they are placed on it as an offering to the gods for the healing of the sick.

"Usually when we have the dance we have the inclosure as you saw it. At other times brush is piled outside the inclosure. Only men are then allowed to enter, as are women occasionally, but the girls and women generally must sit outside the brush pile and look on from there. When we danced the other day you saw clothes and eatables given away. You also saw that one dog was eaten. These were offerings to the manito.

"The (imaginary) overseers of the dance and of the society itself are *Wahbong*, *Shawanong*, *Negabeanong*, *Kewatenong*, and *Bagamagan*. The first four represent the semi-

cardinal directions and the four winds, and the last is the Great Spirit. *Wahbong* (*wabun*) is the morning god. He has a drum called *Tay-way-y-gan*. He lives in the eastern sky and is the sky spirit there. He is also the East Wind. *Shawanong* is the south manito, the god of the warm south wind. *Negabeanong* is the west manito. He is the god of the sunset sky and the west wind, the god of the good rains. *Kewatenong* is the god of the northern skies and the north wind, bringing the cold stormy weather of winter. *Bagamagan*, the Great Spirit, has horns and his head is red like the sun. He gave the Indians the war club to defend themselves.

“The dance is a head man dance and is held to give presents to the head men and head women of the tribe, as these represent the people to the manito. When we begin the dance we fire off guns and pretend to be fighting. The dance, therefore, is also held to celebrate the old fight time and the establishment of peace, the no fight time, for we smoke the pipe of peace.”

ARCHEOLOGICAL NOTES

Field Work

In the latter part of August, 1933, Jack Heibler and Tom Spence brought to the Milwaukee Public Museum parts of a cranium found in a mound in Jefferson County. They were advised to go back and see if they could find additional materials and also make a survey of the mounds. On September 2 they came back with the remains of the upper half of the skeleton of a child, five shell beads and a rough survey of the group of mounds. The beads were like those of the Aztalan type of culture.

On September 5, Earl Loyster, Jack Heibler and T. L. Miller visited the site and made a survey of the group of eleven mounds with tape line and prismatic compass. The mound from which the skeleton was obtained has been completely carried away and the gravel hill upon which it was situated is now used as a gravel pit. As nearly as could be determined, the burial was in the flesh, extended and disposed on the undisturbed gravel surface. The mound was then built over the burial.

The beads are barrel-shaped, of native clam shell and perforated from both ends. They are very similar to beads found at Aztalan and at Cahokia, Illinois.

This group of eleven mounds is situated on a high gravel hill on the Joe Heger and John Schwab farms, the SW corner of the SW $\frac{1}{4}$ of the NW $\frac{1}{4}$ and the NW corner of the NW $\frac{1}{4}$ of the SW $\frac{1}{4}$ of Sec. 23, Aztalan Twp., Jefferson County. All of them have been dug into by unknown parties. The lay of the land is very similar to that at the Aztalan site. To the east is the Rock River and nearby is a fine spring. Time was too limited for a prolonged search, but undoubtedly a prehistoric village site was located in the vicinity.

Miscellaneous

To a past president of the Wisconsin Archeological Society, Mr. Charles G. Schoewe of Milwaukee has come the award of an honorary curatorship in the Oshkosh Public Museum. This award is a distinction which has fallen to only three other individuals.

The award is in recognition of Mr. Schoewe's untiring efforts in the field of archeology. Mr. Schoewe has donated many splendid specimens to the Oshkosh collection, and it is in appreciation of his unselfishness in sharing his finds that the award was made.

Not only is Mr. Schoewe to be congratulated, but the Oshkosh museum as well for having so generous and faithful a friend.

Following is the text of the award:

Certificate of Honorary Curator

The Board of Directors of the Oshkosh Public Museum, at a meeting duly held on the 22nd of August, 1933, by unanimous vote thereof, in accordance with the rules, conferred on Charles G. Schoewe the title of Honorary Curator of the Oshkosh Public Museum.

Charles G. Schoewe's constancy of purpose to the high ideals of the founders of the Oshkosh Public Museum has been, in a very large measure, responsible for its sound and rapid growth.

It is with deep appreciation of his untiring efforts and unselfish devotion that the title of Honorary Curator is conferred on Charles G. Schoewe.

It is little enough that we can do to recompense him for his fine sense of loyalty and fidelity toward this institution.

Given under our hands at Oshkosh, Wisconsin, this 22nd day of August, 1933.

Museum Board—

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Milton F. Hulburt, chairman of our archeological survey committee, recently addressed the Sauk County Historical Society on the subject of early Indian villages and settlements in Sauk County. The talk was illustrated by means of maps and charts showing the occurrence of prehistoric trails and occupation sites, which as a rule follow the natural drainage of the region. Much of the information used is available as the result of Mr. Hulburt's own intensive research during the last several years.

Publications

The present status of archeological information in one of our newly archeologically minded neighbor states is clearly defined by George Will in: *A Résumé of North Dakota Archaeology*, N. D. Hist. Quart., Vol. 7, Nos. 2-3, pp. 150-61, 1933. Price \$0.75. Apply to Russel Reid, Superintendent, State Historical Society of North Dakota, Bismarck, N. D.

A digest of evidence collected from 1607 to 1933, relating to the aborigines of Virginia, is contributed by David I. Bushnell, Jr., in: *Evidence of Indian Occupancy in Albermarle County, Virginia*, Smithsonian Miscellaneous Collections, Vol. 89, No. 7, 12 pages with 11 plates, Washington, October, 1933.

The last issue of *The Masterkey*, Vol. 7, No. 6, published by the Southwest Museum, Highland Park, Los Angeles, California, contains among others the following articles: *A Man's Way* (regarding Pima Indian warfare), by Arthur Woodward; *A Mysterious Bracelet* (of silver, gold and turquoise, found in the Grand Canyon), by M. R. Harrington; *Scorpion Hill* (archeological research in Nevada), by Bertha Parker Thurston; *A Choctow Throwing Club*, by Frank Bryan.

Elsie Clews Parsons is the author of a new publication on Southwest Indian customs: *Hopi and Zuni Ceremonialism*, *Memoirs of the American Anthropol. Assoc.*, No. 39, 108 pages, 1933. Price \$1.10. Address Dr. Robt. H. Lowie, Dept. of Anthropology, Univ. of Calif., Berkeley, Calif.

Dr. and Mrs. Melville J. Herskovits share the authorship of a new contribution to that little known subject, *African Negro ethnology*: *An Outline of Dahomean Religious Belief*, *Memoirs of the American Anthropol. Assoc.*, No. 41, 77 pages, 6 plates, 1933. Price \$0.85. Address as above.

Among others, the following articles are contained in the last issue of the *American Anthropologist*, Vol. 35, No. 4, October-December, 1933: *Ethical Attributes of the Labrador Indians*, by Frank G.

Speck; Narrative of an Arapaho Woman, by Truman Michelson; Some Aztec and Pueblo Parallels, by Elsie Clews Parsons; Carrier Onomatology, by A. G. Morice; A Discussion of the Gates Classification of Maya Hieroglyphs, by Hermann Beyer; Tanaina Culture, by Cornelius Osgood; Archaeological Site of Hato, Venezuela, by Gladys Ayer Nomland; Mummified Heads from Alaska, by Frederica de Laguna; Making Cantaros at San Jose Tateposco, Mexico, by Paul Taylor. Address as above.

To those interested in physical anthropology, H. L. Shapiro's paper: The Physical Characteristics of the Ontong Javanese, is recommended. Anthropological Papers, American Mus. Natur. Hist., Vol. 33, No. 3, 52 pages, 7 figures, New York, 1933. Price \$0.50.

Tales of the Navajo fill 179 pages in Pliny Earle Goddard's report on: Navajo Texts, Anthropological Papers, American Mus. Natur. Hist., Vol. 34, No. 1, New York, 1933. Price \$1.75.

A large collection of most interesting California Indian myths are contained in: Pomo Myths, by S. A. Barrett, Milwaukee Public Museum Bulletin, Vol. 15 (entire volume), 608 pages, November, 1933. Price \$5.00.

Two booklets recently issued as additions to the "Enjoy Your Museum" series, edited by Carl Thurston, are: No. IIIa, Hopi Pottery, by Frederic H. Douglas; No. IVa, Navajo Rugs, by Dane Coolidge and Mary Roberts Coolidge. Price \$0.10 each with two additional cents for postage. Address Esto Publishing Co., P. O. Box 46, Pasadena, Calif.

Attention

As a result of CWA activities throughout the state, archeological remains are being encountered with considerable frequency. It is important that as many of these materials and as much of the associated data as possible be saved for scientific study. It therefore becomes the specific duty of all members of the Society to get in contact with those in charge of local CWA projects and to make arrangements to be notified by these officials when human bones or Indian objects are encountered by the workmen. Upon receiving such information, the individual should notify the nearest museum, or if there is no interested institution reasonably available, an attempt should be made to save as much as possible of the remains and associated information. These data should be carefully recorded and a copy sent to our secretary, Chas. E. Brown, State Historical Museum, Madison.

W. C. McKern, President



The Wisconsin Archeologist

Vol. 13

April, 1934
NEW SERIES

No. 3



PUBLISHED QUARTERLY BY THE
WISCONSIN ARCHEOLOGICAL SOCIETY
MILWAUKEE

Accepted for mailing at special rate of postage provided for in Sec. 1103
Act, Oct. 3, 1917. Authorized Jan. 28, 1921.

WISCONSIN ARCHEOLOGICAL SOCIETY

The Society is a state department, receiving a part of its support from the state. Its funds are under state control. Its work is well and widely known. It has received the approval of leading American archeologists, who agree that it deserves the full support of all Wisconsin citizens interested in the state's archeological history.

The Society's activities comprise the location, recording, investigating and preservation of Wisconsin Indian remains, folklore and history, all of which are rapidly disappearing and must be recorded and saved immediately if ever.

Through its efforts many fine groups of Indian earthworks and other aboriginal monuments and remains have been permanently preserved to the public. Most have been marked with descriptive metal tablets. Others are being protected. Surveys and explorations have been conducted in many sections of the state.

It is also engaged in encouraging the establishment of public museums and collections and in discouraging the manufacture and sale of fraudulent antiquities.

Regular monthly meetings of the Society are held during the months September to May, inclusive, in the Trustees' Room of the Milwaukee Public Museum. Meetings are open to the public. No regular meetings are held during the months June to August, inclusive. Special field meetings are occasionally held during the vacation months.

The results of its research and other activities are made known through its regular quarterly publication, *The Wisconsin Archeologist*. Thirty volumes have appeared. The Society has a large membership distributed through every part of the state.

It is co-operating to the fullest extent with all of the various scientific and educational organizations and institutions of Wisconsin.

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Milwaukee, Wisconsin

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and preservation of Wisconsin antiquities

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Artifacts from the Scottsbluff Bison Quarry, Nebraska.

The Wisconsin Archeologist

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VOL. 13

MILWAUKEE, WIS., APRIL, 1934

NO. 3

New Series

INTRODUCTION

W. C. McKern

An increasing number of reports on comparatively recent discoveries indicating the presence of man in the Western Hemisphere in near-Pleistocene times have appeared in scientific and popular publications during the last few years. These have served to arouse in the minds of both the laity and specialists in American archaeology a renewed interest in the subject of man's antiquity in America. One result of this renewed interest has been a sharp division of opinion, with many interested scholars joining one or the other of opposite camps of partisans, one whole-heartedly supporting the hypothesis of pre-recent Americans, the other definitely and uncompromisingly opposing such an hypothesis. Although many, perhaps a majority of interested students, have not enlisted in this conflict, the number represented in the ranks of the opposing groups is, unfortunately, large.

A careful analysis of the essential causes of this rather violent partisanship will demonstrate, I believe, that an outstandingly active factor is the emotional factor. One student, primarily as the result of early training and acquired habits of thought, is affected by an arbitrary, intolerant conservatism regarding this subject, which acts as an emotional brake upon the wheels of his intellectual reaction to new stimuli; he finds it difficult to render an unbiased judgment on the authenticity of data tending to discredit his cherished and too-rigidly established preconceptions. Another student permits unharnessed enthusiasm, motivated by a romantic urge, and possibly stimulated by a desire to establish, in self-defense, an original statement of position, to subdue any element of purely logical criticism that might otherwise serve as a check on emotional propensities. Both types of students select their evidence and, on occasion, yield to emotional heat and personal recriminations. Such attitudes and actions are very human, but most unscientific.

Science is, and must be, essentially critical. It can not yield allegiance to a newly conceived hypothesis, nor con-

tinue to support a previously accepted hypothesis, in the face of available new evidence, until that evidence has been mercilessly subjected to the purifying fires of criticism. The student of science is activated by one fundamental principle: to determine the truth at any price; at the price of discarding the most important plank in one's existing platform of tenets; at the price of demonstrating the falsity of one's own pet theory. The student of science has no logical right to arbitrarily accept or reject an hypothesis on a basis of superficial indications, without the most critical, but fair and unprejudiced, examination of the data offered in its support. On the other hand, he has no logical right to expect the open acceptance of his own hypothesis prior to the establishing of adequate supporting evidence beyond a reasonable question of doubt. His field and laboratory methods must be such as to forestall the accusation of inaccuracy. His findings should be recorded in a manner to offer unquestionable proof of their authenticity. Such methods of research have not characterized, in all instances, the work of those who have discovered and reported data employed to establish the pre-recent occupation of America by man. The field investigators involved not infrequently have failed to realize that the means for proving the accuracy of a find are as important as its discovery.

The authors of the following thesis, which treats of the case for and against pre-recent man in Nebraska, are to be congratulated upon their strictly scientific attitude towards the subject. They are qualified scholars in a position to know the data, and the facts involved in the securing of them, engaged in an earnest effort to separate the chaff of unfounded assumption from the grains of fact. They start out with no preconceived theory to warp their conclusions. Consequently, their findings comprise a most valuable contribution apropos to one of America's most important archaeological problems.

AN EVALUATION OF RECENT NEBRASKA FINDS SOMETIMES ATTRIBUTED TO THE PLEISTOCENE

Earl H. Bell and William Van Royen

I

In the past few years the question of possible Pleistocene habitation of America has again become a subject of discussion among scientists, and various new sites suggesting such antiquity of man in this continent have been reported. In Nebraska, recent finds of this nature have attracted so much attention that it was considered worth while to investigate them and prepare a somewhat detailed and critical report.

In connection with discussions relative to the antiquity of man in America it is to be regretted that the terms "Pleistocene" and "Post-Pleistocene", as generally used, do not and can not have a sharply defined chronological meaning. In the regions near the outer margin of the Wisconsin glaciation the true Post-Pleistocene naturally began earlier than farther to the north. In Sweden the Pleistocene period is, somewhat arbitrarily, considered to end with the retreat of the ice to the western and northern sections of the Scandinavian peninsula and the breaking up of the ice cap into two parts. This took place, according to G. de Geer, from nine to ten thousand years ago. As long as no definite evidence to the contrary is offered, we may assume that the final disappearance of the Wisconsin was approximately coeval with that of the Eurasian Würm ice sheet. If man entered this continent during the latter part of the retreat of the Wisconsin, say ten thousand to fifteen thousand years ago, he would in reality need to be classed as Post-Pleistocene, although the remains of his existence, either artifacts or bones might often appear to be of Pleistocene age. Only if man entered America before the Wisconsin reached its greatest extension, according to recent estimates considerably more than forty thousand years ago, we might, in truth, speak of Pleistocene man.

II

In 1906 and 1907 the papers and scientific journals carried news and articles describing the so-called "Nebraska Loess Man" and considered the pros and cons for its Pleistocene age. After careful study of the skeletal material itself, of the conditions of the find and of any evidence of intrusion, however, the general conclusion was that the location of the remains did not constitute definite proof of human occupation of America during the Pleistocene, if, indeed, the remains were not of comparative recent origin.

With the exception of the discovery in 1922 of a peccary tooth, for a while referred to as a tooth of *Hesperipithicus Harold-Cookii* (so named after the finder), all remained quiet on the Nebraskan front until 1929. During that summer a paleontological party of the University of Nebraska, under the field management of Mr. C. Bertrand Schultz, at the time an undergraduate student of paleontology, discovered a peculiar dart point reminiscent of those discovered in the Folsom quarries of New Mexico, in association with fossil bones of a bison⁹, thought to bear resemblance to those of *Bison occidentalis*, an extinct type.

In 1931 Mr. Schultz's party reinvestigated an old quarry from which eight years previously Mr. F. G. Meserve had removed two skulls of *Bison occidentalis* with which a dart point was found associated¹⁰. The Schultz party removed more bison bones and found still another point¹¹.

During this same year, Mr. A. M. Brookings, Director of the Hastings Museum, reported the finding of a Folsom type point in association with a fossil mammoth¹².

In the course of the field season of 1932 Mr. Schultz worked a third bison quarry near Scottsbluff, Nebraska, a few hundred yards from the foot of Signal Butte. In this

⁹ Schultz, Bertrand: *Association of Artifacts and Extinct Mammals in Nebraska*. Nebraska State Museum, Vol. I, Bulletin 33, pp. 271-273.

¹⁰ Meserve, F. G., and Barbour, Erwin H.: *Association of an Arrow Point with Bison Occidentalis in Nebraska*. Nebraska State Museum, Vol. I, Bulletin 27.

¹¹ Schultz, Bertrand: *op. cit.*, p. 273 ff.

¹² Figgins, J. D.: *An Additional Discovery of the Association of a "Folsom" Artifact and Fossil Mammal Remains*. Proceedings of the Colorado Museum of Natural History, Vol. X, No. 4, pp. 23-24.

quarry he found four points and a scraper in association with many bison bones¹³.

Early in September, 1932, Mr. Robert Cape, of Dalton, Nebraska, discovered an implement in what he termed a "soft sandstone" about eight feet below the surface¹⁴. With the assistance of Mr. F. Denton, graduate student of paleontology, who happened to be in that neighborhood, the implement was removed in a block of matrix and sent to the University of Nebraska. Through the co-operation of Science Service, the Departments of Geography and Anthropology, and Colonel G. L. Waters, we shortly afterwards were able to investigate this find and at the same time to make further observations at and in the neighborhood of Signal Butte. In the meantime Mr. Cape found two more scrapers at a lower level, and while at Dalton our party removed in matrix a fourth implement.

In order to gain a broader perspective of the latter finds we determined to investigate personally the other recent Nebraska discoveries.

III

The detailed study of the Pleistocene and Post-Pleistocene of the state of Nebraska is still in its first stages. To date a considerable stock of valuable information regarding these youngest formations has been assembled in connection with the work on the soils and the water resources of the state¹⁵. Thus far, however, very little pertaining directly to the Pleistocene of Nebraska is available in printed form. In connection with a survey of the water resources, a detailed study of the Pleistocene of south central Nebraska has been made during the last few years by Messrs. Condra and Lugn. The results of this study will be available some time in the near future.

The Nebraskan and Kansas glaciations covered in the eastern part of the state a strip parallel to the Missouri

¹³ Barbour, Erwin H., and Schultz, C. Bertrand: *The Scottsbluff Bison Quarry and Its Artifacts*. Nebraska State Museum, Vol. I, Bulletin 34, pp. 283-286.

¹⁴ Bell, Earl H. and Van Royen, William: *Investigation of a Site in Western Nebraska Yielding Artifacts Embedded in a Sand Cliff*. Science Service Research Aid Announcement, No. 181, March 23, 1933.

¹⁵ See publications of Conservation and Survey Division of Nebraska, G. E. Condra, director.

River about 70 to 80 miles wide. The younger glaciations did not reach Nebraska. The Wisconsin remained approximately 60 miles east of the Missouri River, although the South Dakota lobe of this glaciation seems at least to have touched the northern border of the state near Yankton, South Dakota. To the Kansan and Nebraska periods belong thick gravels in eastern Nebraska. According to A. L. Lugen, only a small portion of these gravels was derived from the inland ice to the east; the bulk of them was carried east by the Platte and other rivers.

In the western part of the state little detailed work as yet has been done on Pleistocene and Post-Pleistocene deposits. That part of Nebraska was affected not so much by the inland ice as by the glaciers on the mountains of Colorado and southern Wyoming, about 100 miles to the west. During the Wisconsin these mountains were heavily glaciated. Both the South and the North Platte rivers must have had a considerably greater volume of water; gravels, sands and finer deposits, derived from the Rocky Mountains, were carried far east during Wisconsin time.

Among the Pleistocene deposits the loesses occupy a position of prime importance. The status of the loess, which in many places occupies the surface, is not yet quite clear. Although the main body of this loess evidently is Pre-Wisconsin, part of it might well be younger¹⁶.

The Pleistocene of western Nebraska has not been correlated with that of the mountains nor has as yet any correlation been attempted with that of the eastern part of the state. Much more detailed work will need to be done before it may be possible to determine with any degree of certainty the relative age of many and especially of the younger Pleistocene deposits of Nebraska. It is to be regretted that the finds under discussion are located mostly outside the area in which the Pleistocene has been studied with some detail.

IV

At this point we shall briefly discuss the finds in the order of their discovery.

¹⁶ Leighton, M. M.: *The Peorian Loess and the Classification of the Glacial Drift Sheets of the Mississippi Valley*. *Journal of Geology*, Vol. 39, No. 1, 1931, pp. 45-53.

The Custer County Finds—Schultz, 1929¹⁷.

This find was in the South Loup valley in Custer County, about 7 miles southwest of Cumro. The bison fragments and the associated point were found 16 feet below the present surface in a 12 inch "vegetation" layer¹⁸ which Mr. Schultz considers to be "of presumably late Pleistocene origin"¹⁹. His description of the strata from top to bottom is as follows²⁰: 6 feet alluvial, grayish-yellow compact sand; 1 foot of light transition zone; 6 feet, 8 inches of loess, yellow, massive, compact, calcareous with carbon streaks; "old soil zone" 3 inches thick; 7 inches of loess; bone layer of 1 foot 6 inches, carbonaceous and highly calcareous. Underneath the bone horizon lies a light yellow loess, which according to evidence elsewhere in the paper is approximately fifteen feet thick²¹. Farther down follow Pleistocene marls.

The point was found "in association with a portion of bison rib about a foot back from the face of the bank"²². It was chipped from black flint. The maximum length is 76 mm., width 17 mm., and thickness 5 mm. It was skillfully chipped by the removal of long flakes. On one side there is a short narrow longitudinal groove. The base is slightly concave, but there is no notching. The whole bears a close resemblance to the Folsom type points found in Folsom, New Mexico, in association with the extinct *Bison texanus* (Fig. 4, a).

The point was sent to the museum of the University of Nebraska and the quarry was left until the fall when Dr. W. D. Strong of the University of Nebraska Archaeological Survey joined the party and aided in the excavation of the fossil bones in hopes of finding another artifact. Although "the majority of the ribs and vertebrae, the scapulae, and pelvic bones were found in alignment, the skull, mandible and a few of the leg bones were missing"²³. No further evi-

¹⁷ Schultz, Bertrand: *op. cit.*, pp. 271-273.

¹⁸ *Ibid.*, p. 271.

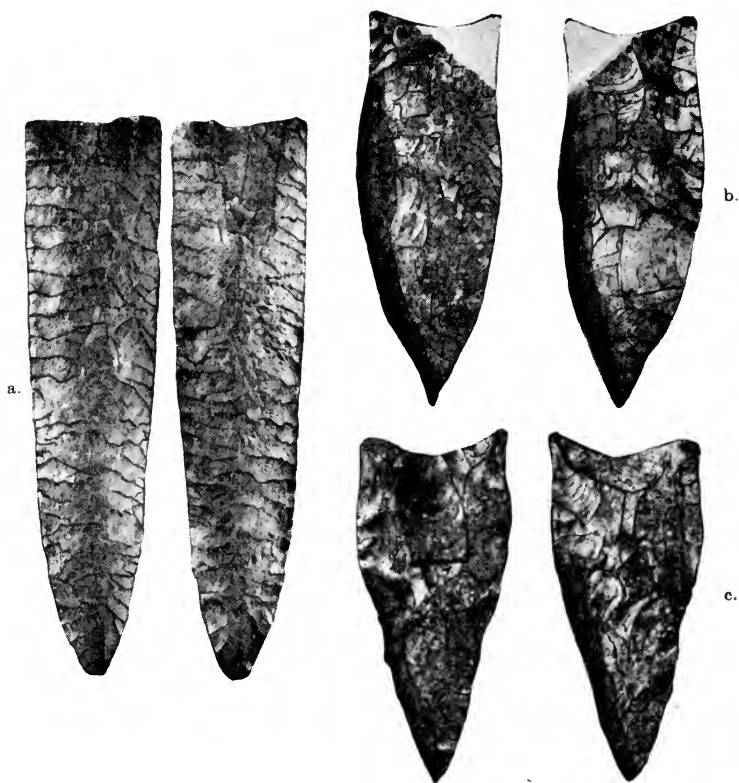
¹⁹ *Ibid.*, p. 271.

²⁰ *Ibid.*, p. 277.

²¹ *Ibid.*, p. 271.

²² *Ibid.*, p. 271.

²³ Strong, W. D.: *Recent Discoveries of Human Artifacts Associated with Extinct Animals in Nebraska*. Science Service Research Announcement No. 130, June 27, 1932, p. 2.



Nebraska artifacts found in association with fossil bison (natural size).
 a. The Custer County artifact, obverse and reverse.
 b. The Meserve, or first Hall County artifact, obverse and reverse.
 c. The second Hall County artifact, obverse and reverse.

Fig. 4

dence of man was found. The lack of the skull and mandible of course makes it difficult to determine the species to which this bison belongs. Lacking these important parts, however, Schultz adds, "The (other) bones compare very favorably with those of *Bison occidentalis* which was the most common bison found in the late Pleistocene, and are very unlike those of *Bison bison*, the living species"²⁴.

Dr. Strong carefully examined the site for evidence of intrusive soil but found no such indications. Neither was there any evidence of long rodent holes down which the point might have fallen²⁵. We must bear in mind, however, that there is a possibility that the same agency which perhaps washed away the skull and jaw of the bison may also have destroyed the evidence of the intrusive nature of the point, which was only about a foot back from the face of the bank²⁶. Any evidence of intrusion of the point by rodent activity could be expected to occur directly above it and toward the face of the bank. Such evidence would have been absent before Dr. Strong's investigation and Mr. Schultz, not realizing the importance of the association²⁷, did not watch for such evidence. We do not mean to say that the artifact was intrusive, but in all fairness we must recognize that such a possibility is not completely disproved.

From the description it appears that the bone horizon lies in the lower part of an old soil horizon, the top layer of which is formed by what Schultz refers to as an "old soil zone"²⁸. If such is correct, the soil must, of course, have developed before the deposition of the topmost 13 to 14 feet of material and it thus appears likely that the bone horizon is of considerable age. Schultz refers to the loess as Peorian and, although he does not make such clear, he evidently means all the loess. This would tend to place the bone horizon in the last inter-glacial epoch. However, since no definite proof can be given for the Peorian age of all the loess, it is as yet impossible to definitely class the bone horizon in which the point was found. In our study of this site

²⁴ Schultz, Bertrand: *op. cit.*, p. 272.

²⁵ Strong, W. D.: *op. cit.*, p. 2.

²⁶ Schultz, Bertrand: *op. cit.*, p. 271.

²⁷ Strong, W. D.: *op. cit.*, p. 1.

²⁸ Schultz, Bertrand: *op. cit.*, p. 277, Fig. 167.

there evolve three important facts. First, it is not definitely proven that the fossils belong to an extinct species. Second, the geological age of the strata can not be definitely determined. Third, the element of accidental intrusion is not entirely eliminated.

The Hall County Find—Meserve and Schultz, 1923 and 1931.

This find occurred in the banks of the Platte River 6 miles south-southeast of Grand Island. The site is located T 10 N, R 9 W, NE Section 15, not 14 as given in Schultz's paper. The bone bed was first worked in 1923 by Professor F. G. Meserve, who removed two skulls and some other skeletal parts of *Bison occidentalis*. A dart point was also found in the undisturbed matrix in association with the fossil bones²⁹ (Fig. 4, b). In 1931, when the quarry was reopened by a party of the Geology Department of the University of Nebraska, a second point was found "amongst a bunch of ribs"³⁰. This artifact was photographed in situ and later removed together with the impression which was taken out in a small block³¹.

This second point was chipped from a blue gray flint. Maximum length is 47 mm., width 30 mm., thickness 5 mm. There are no notches for hafting, but on one side of the base there is a longitudinal groove 15 mm. x 8 mm. x 1½ mm. The workmanship is only fairly good. One outstanding characteristic is the decidedly right beveled edges (Fig. 4, c).

The element of accidental intrusion is diminished by the presence of two finds discovered at rather long intervals by different parties. It is, of course, to be regretted that neither of the finds could be left in situ long enough to be examined by other scientists. However, the latter find was photographed in situ and the soil impression preserved.

A description of the strata from top to bottom, according to Schultz, is as follows³²: 2 feet 8 inches of "alluvium";

²⁹ Meserve, F. G. and Barbour, Erwin H.: *op. cit.*; also Schultz, Bertrand: *op. cit.*, p. 274.

³⁰ Barbour, Erwin H. and Schultz, C. Bertrand: *The Mounted Skeleton of Bison Occidentalis and Associated Dart-Points*. Nebraska State Museum, Vol. I, Bulletin 32, p. 264.

³¹ Schultz, Bertrand: *op. cit.*, p. 273.

³² *Ibid.*, p. 277, Fig. 2.

1 foot 4 inches of yellow clay silt or loess; 13 inches bone horizon, highly carbonaceous clay silt; 4 feet 11 inches of silt which turns from gray to yellow, with increasing calcium carbonate content. Below this lie what are referred to as Kansas sands and gravels.

According to Mr. Schultz, "the exact age of the deposit could not be determined with finality, but the deposit plainly shows considerable antiquity and might well be of Peorian age"³³.

The bones are found at a depth of about four feet below the present sod line in what we found to be a cut bank which stands about twelve feet above the Platte River water level. During our visit the lower three feet were not exposed because of a higher river level. As a result of erosive activity of the river, vegetation is absent on the bank for about a distance of half a mile upstream from the site, and thus a continuous fresh exposure is available. The top of the bank is rather level, but at a distance of about 100 to 200 yards from the river it gently rises to the general level of the land on the southeast side of the Platte River, about forty feet higher. Schultz claims that "Erosion has removed much of the overhead which was above the deposit, and now only about four feet remain"³⁴. Although the gentle slope to the upland bears some marks of erosion, it is doubtful if the overburden above the bone horizon ever was very much thicker than the present four feet. On the contrary, we seem to be dealing with a low river terrace. The gray silt below the bones is full of streaks of decayed vegetable matter and is clearly water deposited. Also the yellow clay silt above the bone layer may be, at least partly, water deposited, since layers of small pebbles occur in it.

The material on top, referred to by Schultz as three feet of "alluvium", is a faintly stratified, rather coarse sand, of a thickness varying from one to four feet. Although water deposition is not out of the question, the absence of pebbles and the varying thickness of the sand seem to indicate wind deposition. Also the northwest exposure and the large amounts of sand in the bed of the Platte River make such probable.

³³ *Ibid.*, p. 274.

³⁴ *Ibid.*, p. 274.

According to the description, the bone horizon is highly carbonaceous. During our visit, however, not much evidence to this effect was left. A careful search for about half a mile along the bank failed to reveal any definite carbonaceous horizon elsewhere, although other bones were found in a few places.

The sands and gravels at the bottom of the exposure are considered by Dr. Lugen to be of Kansan age. All that can be said at present with any degree of certainty about the deposits above these sands and gravels is that they are Post-Kansan. Further classification is at present impossible. The total situation, however, is not suggestive of great age.

*Nuckolls County—Brookings*³⁵.

Later in the same season, 1931, while Mr. Brookings, Director of the Hastings (Nebraska) Museum, and a party were excavating a fossil mammoth near Angus, Nebraska, one of the members of the party displayed a point which he reported to have "removed from about midway beneath the scapula"³⁶. The point was "chipped from a blue gray material and presents a very fresh unpatinated appearance"³⁷. "It is very crude in workmanship, the only unusual technique employed being the marked longitudinal groove which extended irregularly from base to tip on both faces"³⁸. Its general shape is leaf-like and, as Strong points out, its shape and the groove are its only claims to the Folsom category³⁹. The retouching technique is very crude in contrast to the type Folsom points which are characterized by fine, long, regular flakes extending from the edge nearly to the center⁴⁰.

"The mammoth bones were covered by almost 16 feet of soil, around the bones are layers of sand and gravel with intermediate deposits of silt and clay"⁴¹.

The section shows a twelve-foot layer of these silts and clays in which the fossil mammoth was found, above which

³⁵ Figgins, J. D.: *op. cit.*, pp. 23-24.

³⁶ *Ibid.*, p. 23.

³⁷ Strong, W. D.: *op. cit.*, p. 6.

³⁸ *Ibid.*, p. 6.

³⁹ *Ibid.*, p. 6.

⁴⁰ *Ibid.*

⁴¹ *Ibid.*

is a three-foot layer of what may be red Loveland Loess. This loess, however, differs a little from the Upland phase of the Loveland in that more sand is present. Dr. A. L. Lugen is of the opinion that the elephant remains at Angus are undoubtedly old, "perhaps as early as mid-Pleistocene". If they are covered by Loveland Loess, they would belong to the Illinoian-Iowan interglacial period and thus be very old⁴².

Dr. Strong summarizes the merits of this find in the following words⁴³:

"On the basis of Schultz's report on the geology of the site and a study of all the other available evidence, Dr. A. L. Lugen regards the elephant remains at Angus as undoubtedly old, perhaps as early as mid-Pleistocene, but feels that there is some reason to believe that the human evidence was not definitely in association with these remains and is much younger, perhaps early recent. Schultz suggests that the scapula might have been undercut and the point washed in by the creek. It is obvious, therefore, that considerable doubt exists regarding the nature of the reported association. The fact that the Angus mammoth remains appear to be mid-Pleistocene, or even earlier in age, makes it the more important that all doubt concerning this matter of actual association be cleared up. Lacking any definite secondary evidence regarding the position of the point under the scapula, the entire case at present rests on the statements of those who removed it.

"Mr. Figgins has confirmed the association in the following words: 'While it is unfortunate that the artifact was removed from the position where it was uncovered, the nature of the undisturbed matrix, its situation, and the integrity of the discoverers exclude doubt of its original association with the mammoth skeleton. It must be regarded as contemporaneous.' (J. D. Figgins, 1931, p. 23.) This is a strong statement and must be carefully considered. Nevertheless in matters of scientific opinion it is the facts on which such opinions are based that are all important. The present writer feels very strongly that before the Angus association is generally accepted by palaeontologists and anthropologists, all of the obscure points should be carefully checked up and the facts published in full. If such studies lead to the acceptance of the association as reported, the matter of age can then profitably be considered by specialists in Pleistocene deposits.

⁴² *Ibid.*, p. 7.

⁴³ *Ibid.*, pp. 7 and 8.

"This last is the greatest desideratum in regard to all the recently discovered associations between man and extinct fauna in North America. In this regard Nebraska discoveries, wherever authenticated, should assume major importance, since they are either in or close to glaciated areas. It is the role of the archaeologist to help establish the facts of each case and to study the cultural implications of each; the matter of period determination rests with the geologists. Above all it is essential that wherever possible other archaeologists, palaeontologists, and geologists should be immediately called to examine the evidence of such associations *in situ*. Unless this is done the full value of the discovery can not be realized and there must always be an element of doubt involved."

It is indeed unfortunate that in the one Nebraska find, of which the geological age can be fairly definitely established, in the excitement of the discovery, the precautions and study necessary to establish the inclusiveness of the association were not made.

*Scottsbluff Find—Schultz*⁴⁴.

During the field season of 1932 Mr. Schultz discovered a new Bison quarry near Signal Butte on the north bank of Spring Creek, a small, left tributary of Kiowa Creek. Both creeks run in a northeasterly direction past the foot of the Butte. In the early part of August the first point was found. Dr. Barbour and one of the authors investigated this find through the co-operation of Science Service.

At that time it was found to be fairly certain that the point was not intrusive to the fossils. The later finds of three more dart points and a snub nose scraper bear out this conclusion and we do not need to consider this possibility further.

Dr. Barbour and Mr. Schultz describe the site as follows: "In trenching its course, Spring Creek has cut and exposed a cross section of an old river channel, in the coarse gravels of which the bison bones occur. This fossil river is incised in a floor of Brule clay (Oligocene), and its gravels vary in size from ordinary sand and pebbles up to chunks of ter-

⁴⁴ Barbour Erwin H. and Schultz, C. Bertrand: *The Scottsbluff Bison Quarry and Its Artifacts*. Nebraska State Museum, Vol. 1, Bulletin 34, pp. 283-286.

tiary sandstones and clays weighing fifty pounds. The coarseness of the material indicates a stream having a considerable volume of water and strong current. Later, due to some cause, climatic or otherwise, the transporting power was reduced, and a lighter load was carried, as indicated by the overlying sand and silt. Still later the river ceased to flow. A covering of from twelve to twenty-seven feet of wind-blown material now rests upon the remains of the old river bed⁴⁵."

According to our observations, the old channel, dug out in the Brule clay, does not appear to be very much wider than the present canyon of Spring Creek. A study of this little canyon and the neighboring territory indicates that the general course of the old channel closely corresponds to that of the present creek. All the visible evidence seems to point toward the occurrence of long range changes in the life of essentially one and the same creek, Spring Creek. Other creeks in the vicinity exhibit evidence of similar fluctuations.

The rather coarse material at the bottom of the quarry requires a greater general flow of water than is available at present, or, possibly, bigger occasional floods. This coarse material grades into finer material above. On top of this again follows a very fine sand. These latter deposits evidently represent a long dry stage, during which much wind-work occurred, and the valley was partly filled. This period was followed by renewed erosion which probably established present conditions. The gravels and sands in which the bison bones were found are a remnant of the older channel deposits which was not removed by the renewed erosional activity of the creek. These sands and gravels do not seem to extend very far into the side of the present canyon, although, since the deposits are right near the junction of Spring Creek and Kiowa Creek, they might extend a little farther horizontally than otherwise would be the case.

The bison bed may be of considerable age. However, with the present very imperfect knowledge of the age of the youngest deposits in the Nebraska panhandle, it is quite

⁴⁵ *Ibid.*, p. 284.

impossible to definitely say whether the bone bed is of post-Wisconsin, Wisconsin, or pre-Wisconsin age.

Specimens of the invertebrate fauna were sent to Doctor F. C. Baker of the University of Illinois and Dr. Junius Henderson of the University of Colorado. According to Barbour and Schultz, "Dr. Baker considers the entire fauna undoubted Pleistocene and that three of the species from the lower horizons are not represented in recent times. Both Dr. Baker and Dr. Henderson think that this fauna has not changed much since late Pleistocene (Pre-Wisconsin) because most of the forms are living today⁴⁶."

It would seem then, also, that the invertebrate fauna is not as yet very strong evidence in support of the Pleistocene age of the quarry.

The bison skulls recovered show a great range of variation; so much that at first Dr. Barbour and Mr. Schultz believed that several species were represented. Now they are of the opinion that, notwithstanding certain divergencies, all of these should be classified as belonging to *Bison occidentalis*.

In consideration of the artifacts (Frontispiece), we wish to point out that while in form and chipping *a* and *d* bear certain resemblances to the Folsom types, *e* is distinctly modern in form, being stemmed and notched. While the chipping of the latter artifacts is fairly good, there is nothing which would set it apart from many points in historical collections. Insofar as that is concerned, we can easily match *a*, *c* and *d* from our camp site collections.

Of the remaining four "artifacts" only one, *h*, shows definite shaping. It is a snub-nose scraper of a type frequently encountered in western Nebraska, especially in the lower stratum of Signal Butte; *g* shows only slight evidence of secondary chipping; *b* and *f* are rejects. Admitting that *a* and *d* are rare on the surface, we must point out that they do occur in that way, although it is fast becoming the custom among amateurs to refer anything like these to the "Folsom culture".

⁴⁶ *Ibid.*, p. 284.

Cape Find—Morrill County, 1932.

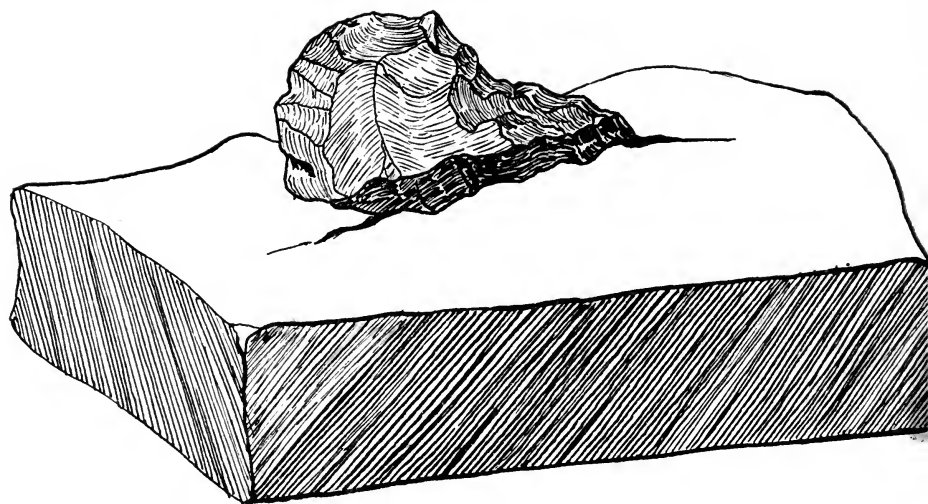
The Cape find is located about 10 miles northwest of Dalton, Nebraska, a short distance above the confluence of the two principal forks of Greenwood Creek and on the east side of what will be referred to as the East Fork. Greenwood Creek flows northward from the highly dissected southern rim of the Scottsbluff-Bridgeport basin, and is a tributary of Pumpkin Creek, which enters the Platte River below Bridgeport, Nebraska. The site is approximately 12 miles south of this town.

As seen from one of the neighboring divides, the valleys of both East and West Fork appear unusually wide for the size of the streams, from half to three-quarters of a mile being a moderate average. At present, however, both forks flow about twenty feet below this general valley level, in more recent valleys which are relatively narrow, but nevertheless leave the streams some room in which to swing from side to side.

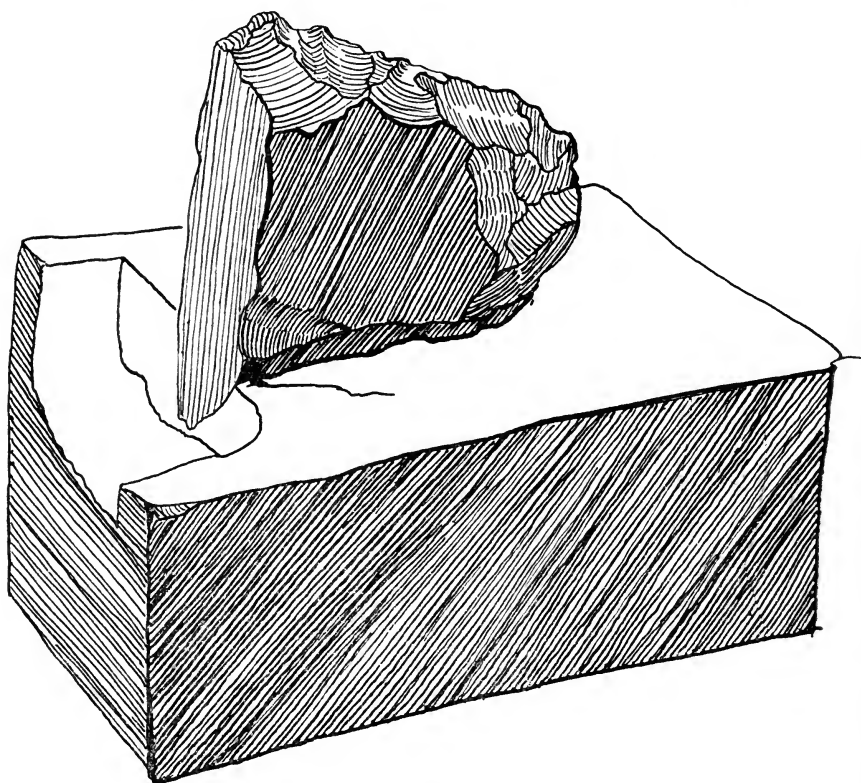
As seen from the present river bottom, the higher level everywhere stands out as wide, flat, well preserved terraces. Near the confluence of the two forks no terraces are visible on either side of the dividing spur. The main terrace levels lie respectively to the west and east of West Fork and East Fork. The site is located in one of the cut banks of the East Fork.

At this point the total height of the bank is approximately twenty feet. Three main divisions are clearly marked. From the present level of the creek bed to about nine to ten feet above we find deposits of well stratified gravels, with intercalations of sand (A).

The lower three feet are talus covered, but behind the talus the gravels are present. These gravels consist mostly of pebbles and some cobbles of Rocky Mountain origin which may have been derived from Ogallala deposits which occur in many places in the uplands to the south. This immediate local origin seems indicated by the fact that boulders of the Arikaree formation, which forms the neighboring divides, occur in these deposits. Clay boulders, some of which are of considerable size, also plead for the origin of the material



a



b.

The Cape Site artifacts.
a. Snub-nose scraper, in matrix.
b. Large scraper, in matrix.

Fig. 5

being within approximately the present drainage basin of the creek. The type of stratification, however, clearly indicates deposition in a stream bed rather than as sheetwash from the heights to the east. Toward the top the gravels gradually become finer.

Above this complex lie approximately six feet of very fine sand which is somewhat cemented together and forms a rather solid bank with a vertical face (B). In this material pebbles of Rocky Mountain origin are scarce and very small. Quite coarse material, evidently derived from the Arikaree of the valley sides, occurs in irregular patches and at various levels. These agglomerations of coarser material have all the earmarks of sheetwash deposits. While the color of the lower part of complex B is a rather light buff, toward the top the material takes on a considerably darker, grayish hue, and evidence of coarse sheetwash becomes more rare. Between the top of B and the material above (C), there is a pronounced break. C is considerably lighter colored and less consolidated than A. There seems little doubt that the top of B is an old soil line. The material (C) above this line is 7 to 8 feet thick. It is mostly fine, with here and there evidence of coarse sheetwash. The bottom three feet are of a light buff color. This turns into gray and shades into the rather dark color which is found immediately underneath the present sod line.

All of the artifacts were found below the old soil line which at that point was 7.5 feet below the present surface. Three of them were in the partially cemented sand and two were in a stratified gravel bank about 20 rods down stream from the main site.

The snub-nose scraper was .3 foot below the bottom of the old soil line and about 7.8 feet below the present surface. It is of the usual plano-convex form with a maximum length of $1\frac{3}{8}$ inches, width of $\frac{7}{8}$ inch, and thickness of $\frac{5}{8}$ inch. A large piece had been broken from the scraper (Fig. 5, a).

No cracks or gopher holes were found, and the matrix around the artifact was quite hard.

The second day at the site Mr. Cape was using a small pick to work in the hard section (B). The pick hit some-

thing hard. Upon examination we found the object firmly imbedded in the hard sand and also located the chip which the blow had broken off. We then worked out the entire edge of the artifact so that about one-half inch was exposed. The secondary chipping was very plain but occurred only on one side of the object. We then removed a block with the tool imbedded.

In the laboratory the implement proved to be a broad flat flake of flint. Both edges had been worked and one end shaped to a blunt, rounding point. The other end was straight, unworked, and appeared to have been the result of a break so that we were unable to determine its original shape. All of the flakes had been thrown from one side; that is, the implement was unifaced. There is evidence of resharpening. It remains at present partially imbedded in its matrix (Fig. 5, b).

In the present condition its maximum measurements are: Length 2 inches, width $1\frac{15}{16}$ inches, thickness $\frac{3}{8}$ inch. If it was broken, we would judge it originally to have approximated four inches in length.

Between the time of Mr. Cape's original find, which he shipped to us, and our arrival, he had worked about 20 rods down stream in a gravel bank in which he found two other artifacts and several heavy unworked flakes. One of these artifacts he reports to have found definitely in situ. Mr. Cape's integrity is beyond question and wherever it has been possible to check on his observations we have found them to be correct. He was unable to establish definitely whether or not the second artifact was in situ. The maximum measurements are: artifact No. 1: length $3\frac{1}{2}$ inches, width $1\frac{3}{4}$ inches, thickness $\frac{3}{4}$ inch; and artifact No. 2: length $2\frac{5}{8}$ inches, width $1\frac{5}{8}$ inches, thickness $\frac{3}{4}$ inch. The similarity of the two and their proximity makes it seem highly probable that they were contemporaneous. Both of these objects are of almost identical material. Both are worked from large flakes and are unifaced, although one edge of the larger one has been retouched from the flat side.

These two implements from the gravel banks resemble the second find described above in that they are unifaced,

sharpened on all edges and slightly rounded at the ends. They differ, however, in that they are much cruder and more irregular. While the find in B appears to have been worked by the pressure technique, those in the gravel bank, A, were shaped by the percussion method and then retouched by careless pressure flaking.

Stratigraphically the gravel bank appears to be a continuation of A of the main site. The general appearance of the beds are the same and the levels correspond.

This places the two cruder implements of the gravel bank at a lower level (at least 6 feet) than those found in the partially cemented sand of B.

The entire exposure clearly suggests changing conditions of deposition. Exposures elsewhere along East Fork and along West Fork seem to indicate conditions similar to those sketched above. The similarity of the different exposures suggests that the changes in deposition can not be considered as entirely the result of lateral displacements of the streams, but that long range changes have occurred in the activity of the creek as a whole.

The lower gravels of A give evidence of a flow of water greater, and probably also more regular, than that of the present. With a relatively heavy load to carry, the creeks seemed to deposit rather than to erode. Complex B suggests a distinctly drier period with little vegetation, much windwork and occasional sheet floods. This period was seemingly followed by a period of greater moisture during which a soil could form on top of Complex B and during which erosion may have prevailed over deposition. Part of Complex C again is indicative of a drier period. After this, once more, the amount of moisture became greater. With a larger flow and a small load the creeks started to cut down, a process in which they are still engaged.

With the rather limited amount of detailed geologic and physiographic work that has so far been done in this part of Nebraska, it is as yet difficult, if not altogether impossible, to form a definite idea of the probable age of these various strata, and therefore of the artifacts which were found in them.

If the implements were dropped where they were found, the time elapsed must account for the period involved in the building up of at least the topmost ten feet of the terrace, plus the period required for the creeks to cut down to their present level, approximately twenty feet below the terrace edge.

As is apparent from the age, location, and appearance of the large trees in the very bottom of many of the canyons, the creeks in this region do not seem to be cutting down their beds as rapidly as is sometimes believed by local residents who are likely to generalize from occasional severe cases of erosion in isolated spots caused by local downpours.

The form of the terraces and the arrangement of the strata make it unlikely that the exposure is only the side veneer of a relatively small filling. On the contrary, the filling seems to have taken place over an area which included the entire width of the present terraces.

It is not improbable that the time required for the deposition of the upper ten feet of the terrace may have been considerably longer than that necessary for the cutting of the stream to its present level. Also, a considerable lapse of time is necessary for the formation of recognizable soil horizons. Thus it is not improbable that the age of the artifacts may be counted in thousands, rather than in hundreds of years.

When did the deposition of these artifacts take place? There seem to be two distinct possibilities. An extensive study of peat bogs in Europe, carried on during the last half century by scientists of different nationalities, has resulted in the discovery that post-glacial climate in the continent of Europe has been subject to pronounced fluctuations, which expressed themselves in vegetational changes.

In North America the work on the pollen content of peat bogs is as yet in its infancy. Sears claims to have found sufficient evidence indicating Post-Pleistocene climatic fluctuations in this country roughly corresponding to those established in Europe⁴.

⁴ Sears, P. B.: "The Archaeology of Environment in Eastern North America". *American Anthropologist*, New Series, Vol. 34, 1932, pp. 610-622.

The most important evidence in relation to the present problem is the analysis, made by G. Lane⁴⁸, of a peat bog in Iowa. This analysis indicated a coniferous vegetation followed respectively by an amaranth vegetation, by prairie, by another amaranth vegetation, and finally by prairie with oak-hickory forest.

The exposure on Greenwood Creek near Bridgeport, Nebraska, seems to fit a similar scheme very well indeed. In this semi-arid environment, climatic changes, especially changes in humidity, must necessarily make themselves felt much more severely than in a humid region. A slight decrease of precipitation over a long period might make serious inroads upon the present vegetation, thus giving sheet erosion and windwork a chance and starting a period of valley filling.

The gravel zone A might, for example, represent the cool and humid period indicated in Iowa by the coniferous vegetation, B might represent the dry amaranth period, the distinct level between B and C the somewhat moister prairie period of Iowa. Part of C might correspond to the second dry amaranth period, while the period necessary for the cutting of the creek beds to their present level might be the equivalent of the prairie-oak-hickory period of farther east.

Peat deposits are known to exist in eastern Nebraska. Thus far, however, no data based on analysis of the pollen and other plant remains in these bogs are available to confirm or refute fluctuations of climate as found by Sears, Lane and others farther to the east.

We also do not know whether these climatic fluctuations, as indicated by Sears, were all of sufficient amplitude to find expression in the topography. If some of the fluctuations were of such brief duration that they did not result in pronounced changes in the activity of the streams, the lower complexes of the exposure at Greenwood Creek might predate the oldest of Sears' periods. Such would very likely bring at least zone A into the youngest Pleistocene.

⁴⁸ *Ibid.*

A further morphological study of the entire area, a careful correlation of the terraces with those found along the neighboring Platte River, and especially a detailed study of the latter should, together with evidence derived from the peat deposits in eastern Nebraska, shed more light on this important problem.

The value of paleontological evidence for the determination of the Pleistocene age of deposits is subject to certain limitations. It is quite possible that various animals, considered characteristic for the Pleistocene, actually survived the ice age proper. *Bison priscus* in Europe is also found in Post-Pleistocene deposits. The same may hold true for *Bison occidentalis* in America. F. Leverett, in his recent paper on the quaternary geology of Minnesota⁴⁰, for example, mentions *Bison occidentalis* in a peat bog near the Cuyuna iron range. Such a peat bog cannot be other than Post-Wisconsin.

The review of these finds clearly establishes one fact: that there are sites in Nebraska, bearing evidence of human activities, the age of which may run into thousands rather than hundreds of years. There are some interesting points of resemblance, especially between the Cape site and the Scottsbluff site, and both sites must be of a certain antiquity. The other cases do not seem to be as clear.

In the present state of our knowledge, however, it is quite impossible to determine whether the finds should be classified as post-Wisconsin, Wisconsin or pre-Wisconsin. Thus far we are inclined to believe the first. Certainly, the burden of the proof lies with those who claim their pre-Wisconsin age. Much extremely careful and patient work on the Nebraska Pleistocene will need to be done before it may be possible to come to a decision on this point, and all the possibilities of the post-Wisconsin age of the individual sites must be eliminated before they can be classed as pre-Wisconsin. To date this has not been done.

⁴⁰ Leverett, F.: Quaternary Geology of Minnesota and Parts of Adjacent States. U. S. Geological Survey, Professional Paper 161, Washington, D. C., 1932.

IDENTIFICATION OF SOME OUTAGAMI VILLAGES

Hjalmar R. Holand

MA CHI HI GA NING

The first known village of the Outagami in Wisconsin was *Ma chi hi ga ning*. Allouez mentions it for the first time in the following words:

"Six large cabins of these poor people (the Outagami) were put to rout this month of March (1670) by eighteen Iroquois from Tsonnontouan, who, under the guidance of two fugitive Iroquois slaves of the Pouteouatamis, made an onslaught, and killed all the people, except thirty women whom they led away as captives. As the men were away hunting, they met with but little resistance, there being only six warriors left in the cabins, besides the women and children, who numbered a hundred or thereabout. This carnage was committed two days' journey from the place of our winter quarters, at the foot of the Lake of the Illinoues (Lake Michigan), which is called *Ma chi hi ga ning*⁵⁰".

As Allouez writes that this village was at the foot of Lake Michigan, some writers have assumed that it was at or near Chicago⁵¹. But Allouez has here mistaken the name of the village for the name of the lake. Two days' journey from his winter headquarters, which were then, in the winter of 1669-1670, a short distance up the Oconto River⁵², would not bring him to the foot of Lake Michigan, three hundred miles away, but it would bring him to the village of *Ma chi hi ga ning*. Chief Simon Kahquados, whose ancestors have lived in that vicinity for several hundred years, states that *Ma chi hi ga ning*, which means "old cleared land", was a village site about two (four) miles south of the Sturgeon Bay portage in Door County⁵³. In order to verify this question, the present writer addressed a letter of inquiry concerning the location and meaning of *Ma chi hi ga ning* to another well informed Potawatomi chief, James Wampum. The answer

⁵⁰ *Jesuit Relations*, 54: 219-221.

⁵¹ Kellogg, L. P.: *Early Narratives*, 152, note 2.

⁵² Neville, A. C., *Wis. Hist. So. Proceedings*, 1905, 143-156.

⁵³ Lawson, P. V.: *The Potawatomi in Wis. Archeologist*, 19:51.

was that it was the name of a village site, meaning "old cleared land", three or four miles south of the Sturgeon Bay canal. This location of the village explains why the Iroquois slaves among the Potawatomi were in position to know about the defenseless state of the village. As the Potawatomi at that time (1670) had their principal village just south of Red Banks, and thus were close neighbors to the Outagami, these slaves were in good position to know the circumstances among the latter.

Allouez, who had just recently arrived from Lake Superior, did not at that time have any conception of the great length of Lake Michigan. In the same letter in which he mentions *Ma chi hi ga ning*, he states that Lake Michigan "is much smaller than Lake Huron". The greatest length of Lake Huron, as known to Allouez at the time of his writing, was the distance from the mouth of French River to Mackinac. As traveled by canoe this distance is about two hundred miles. This distance, measured from Mackinac along the north and west shore of Lake Michigan, would about reach to Kewaunee, Wis. With the knowledge that Allouez then had of the Great Lakes, he, therefore, assumed that the Outagami village, a few miles south of the Sturgeon Bay portage, was "near the foot of the lake".

This village is of interest to historical students because, on two different occasions, it saved the lives of some of the most eminent explorers of America. On October 2, 1679, Robert LaSalle with fourteen men, on his first journey to explore the Mississippi, was compelled by storm to land six miles south of this village. Fearing that its people belonged to a hostile tribe, he erected a barricade. But the villagers proved to be Potawatomi who generously gave him abundant food supplies and enabled him to continue on his journey⁵⁴.

One year later, Nov. 14, 1680, the freezing and starving survivors of this ill-fated expedition, under command of Henry Tonty, arrived on their retreat to this same village, hoping there to find succor. The Indians were all away on

⁵⁴ The site of LaSalle's barricade has now been created into a county park, known as Robert LaSalle County Park, and the Door County Historical Society has erected a monument to the explorer. Holand, H. R.: *Peninsula Historical Review*, 1, No. 2, 1-12; Vol. 4: 1-13, 27-29.

their winter hunt, but Tonty and his men, digging in the snow for kernels of corn overlooked by the field mice, found sufficient to save them from starvation. A few days later they were rescued by the Potawatomi hunters⁵⁵.

OUES TA TI NOUNG

When the Outagami returned to *Ma chi hi ga ning* from their winter hunt in the spring of 1670, and found only the dead bodies of their people, they withdrew far inland and built a new village called *Oues ta ti nong*. Here they were visited by Allouez, April 24-27 of the same year. George R. Fox believes this village was at or near the present village of Leeman in Outagamie County where he found much evidence of former Indian occupation. Dr. Kellogg is inclined to agree with this conclusion⁵⁶. There are, however, a number of reasons which show that *Oues ta ti nong* was not at Leeman. These reasons are as follows:

On April 16, 1670, Allouez set out from his headquarters near the mouth of the Oconto River to visit the Outagami. If this village had been at Leeman, the logical thing to do would have been to paddle up Oconto River, which is a large stream flowing from the west. At Pulcifer, about twenty-five miles up the river, it turns northward, but here a four-mile portage could be made to Lake Shawano and the Wolf River, down which the canoe would glide with little effort to Leeman. Not counting the extra mileage due to the meanderings of the streams, the whole distance is only about fifty miles.

But Allouez did not go that way. Instead, he went by way of Green Bay, the Fox River and Lake Winnebago, and ascended the Wolf River from its mouth, taking nine days for the journey. Again allowing nothing for the windings of the streams, the distance to Leeman by this route would be more than three times as far as if he had ascended the Oconto. The route was not chosen because Allouez had no means of knowing which way to go. There were Outagami present in the village on the Oconto, and he, no doubt, had one or more of them with him as guides.

⁵⁵ *Ibid.*, 2:3-10.

⁵⁶ Fox, G. R.: *Wis. Archeologist*, 15:5, 18-19; Kellogg, L. P.: *The French Regime*, 127, note 50.

Oues ta ti nong was located near the east bank of the Wolf River, as is shown on several early maps⁵⁷. Allouez writes that this was two days journey from the Miami⁵⁸. The Miami were found by him two or three miles south of the present city of Berlin, Wis. As Leeman is one hundred and ten miles from Berlin, following the winding river, it is plain that *Oues ta ti nong* could not have been at Leeman. Two days' journey, or a little more than forty miles, from Berlin up the Wolf River, would bring the traveler to the so-called "cut-off", a few miles southwest of New London. This is the most probable site of *Oues ta ti nong*, and here has been found an abundance of Indian artifacts. This agrees very well with Perrot's statement that the Outagami were settled about thirty leagues from the Bay⁵⁹ (Green Bay) as the "cut-off" mentioned above is about eighty-five miles by canoe route from the bay. It does not at all agree with the supposition that *Oues ta ti nong* was at Leeman. By land Leeman is less than thirty miles from the bay across a dry and open country. By water it is five times as far.

But there is further evidence to show that *Oues ta ti nong* must have been near the "cut-off". After Allouez in 1671 built his mission house at the place which is now in the city of DePere, he made many journeys to *Oues ta ti nong*. Having found that the route by way of Lake Winnebago and the Wolf River was needlessly long, he discovered a shorter route. He did not go northwest to Leeman, but southwest along the Fox River to a point "two leagues below the great rapid called the Kakalink" (now Kaukauna), and from there went west, reaching *Oues ta ti nong* in less than two days⁶⁰. This route led him along a low dividing limestone ridge with no streams to ford and through a fairly treeless country where the walking was easy. This ridge leads directly toward the "cut-off". The Little Lake St. Francois, which he says was two leagues from *Oues ta ti nong*⁶¹, was no doubt the present White Lake, about five miles west of the "cut-off".

⁵⁷ See Allouez' excellent map in the *Relation* of 1670; also in *Wis. Hist. Colls.*, 16:80; also Marquette's map of 1673 and the (Parkman No. 4) map of 1680.

⁵⁸ Kellogg, L. P.: *Early Narratives*, 154.

⁵⁹ *Ibid.*, 81.

⁶⁰ *Jesuit Relations*, 58:43, 47, 49.

⁶¹ *Ibid.*, 59:233.

The Outagami had here a most favorable location, for just to the west and southwest of them, in present Waupaca and Waushara counties, are a multitude of lakes and running streams which made this region the best place in the state for hunting beaver. It was the abundance of beaver which gave the village its name, for *Oues ta ti nong* means "beaver village"⁶². It was probably the invasion of these choice hunting grounds by the Sioux to the west and the Ojibwe to the north which brought on the protracted wars of the Outagami with these tribes. Here, too, according to La Hontan, the Outagami, while on their winter hunting trip, were attacked in 1683 by a thousand Iroquois⁶³ who were defeated by a brilliant stratagem of the Outagami. The long and narrow isthmus between Silver Lake and Crystal Lake, three miles southeast of Wautoma, exactly fits La Hontan's description of the battleground.

It was probably the fear of Iroquois vengeance which caused the Outagami about this time to desert their village of *Oues ta ti nong*. Their principal settlement was made many days' journey to the southwest on the shore of Buffalo Lake near its southern end. This identification is determined by La Hontan, who says that he left this village about noon on October 16, 1689, and reached the portage to the Wisconsin in the evening of the same day⁶⁴. As canoeing in small streams after dark is impossible because of snags, and as the sun sets early in October, this shows that the village could not have been more than ten or twelve miles north of the portage. There was, however, according to La Hontan, another Outagami village about two days' journey further down-stream on the Fox River, probably on Lake Puckaway.

After this, for almost fifty years, the Outagami dominated the Fox River, building many villages along its course, becoming the dominant tribe in Wisconsin. None of the names of these villages, before which the cannon of the French thundered in vain, have been preserved.

⁶² According to information in a private letter from J. N. B. Hewitt, Bureau of American Ethnology.

⁶³ *Voyages*, 1:488-494.

⁶⁴ *Ibid.*, 1:177.

ARCHEOLOGICAL NOTES

Meetings

November 20, 1933. President McKern conducted the meeting. There were 125 members and visitors present. Secretary Brown announced the election of Lieut. Charles L. Emerson, Gold Beach, Oregon, and Henry L. Ward, Green Bay, as annual members. The death of George Richardson, an honorary member and Milwaukee pioneer, was reported. President McKern asked the assistance of the members in enlisting new members. Persons in the audience were cordially invited to join the Society.

Dr. Albert Bartle gave an illustrated lecture on "Early Man", which was exceptionally interesting and instructive. At its conclusion he was thanked by the president for preparing so exhaustive an address. Various members and guests participated in the discussion which followed.

The election of Charles G. Schoewe as an honorary curator of archeology of the Oshkosh Public Museum was announced, Mr. Schoewe exhibiting the certificate which he had received. Exhibits of interesting stone and other Indian artifacts were made by Messrs. W. K. Andrew, Paul Scholz and T. L. Mills.

December 18, 1933, Vice-President Kastner presiding. The attendance of over fifty members was very gratifying for this pre-Christmas meeting. Mr. George L. Waite, honorary curator of botany of the Milwaukee Public Museum, gave an illustrated lecture on "Birchbark Canoe Building Among the Ojibwe". He delineated the construction of a canoe from the felling of the tree to the final launching of the graceful craft. A discussion by various members followed.

In the absence of Secretary Brown, Dr. H. W. Kuhm acted as secretary. At the close of the meeting Mr. Paul Joers exhibited a beaded Crow Indian ceremonial apron, Mr. Wm. K. Andrew a pipe and crescent, Mr. E. C. Steene elk earrings and a quill-decorated buckskin coat and Mr. Arthur Gerth five flint spearpoints. Each exhibitor explained the character of his own specimens.

January 15, 1934. Because of the large size of the audience, over three hundred persons, this meeting was held in the auditorium of the Milwaukee Public Museum. No announcements of the meeting of the Executive Board or other announcements were made by the president or secretary. President McKern introduced the speaker, Miss Grace West, a daughter of Mr. George A. West, one of the Society's founders and for many years one of its officers and very active members.

The subject of Miss West's lecture was "A Visit to Norway and Sweden", a travel tour to that distant part of the world, which she made with Mrs. West a summer ago. The speaker, who thus made her first appearance as a lecturer on the Society's programs, gave a most pleasing and instructive account of the people, the historic and other buildings and of the very beautiful scenery of the two countries. This she illustrated with a fine collection of colored lantern slides. At the conclusion of her lecture the President extended to the speaker the grateful thanks of her large and interested audience.

February 19, 1934. President McKern in the chair. Secretary Brown announced the election as annual members of Arthur O. Johnson, Madison; Earl H. Bell, Lincoln, Nebraska; Harold Feldman, Wauzeka; and Victor S. Crawn and F. C. Laue, Milwaukee. The death of Winfield W. Gilman, Madison, first vice-president and a charter member of the Society, was also announced. The Executive Board had accepted the invitation of Secretary Schuette to hold its annual joint

meeting with the Wisconsin Academy of Sciences, Arts and Letters at Lawrence College, Appleton, on April 6 and 7. All members were invited to enter papers in the program.

The illness of Dr. Louise P. Kellogg made it necessary to make a change in the program, Dr. L. S. Buttles taking her place and giving an interesting illustrated lecture on the "Archeology of Arkansas, Mississippi and Louisiana", a part of the country to which he had made several archeological expeditions. He illustrated his lecture with numerous specimens of earthenware and stone, and other implements from that region. His lecture was afterwards discussed by the Messrs. Bartle, West, Brown, Schoewe and other members in his audience.

Mr. West presented resolutions of sympathy on the death of Mr. W. W. Gilman. These were approved by the members present. The President appointed the Messrs. West, Buttles and Thorne a nominating committee to nominate officers for the ensuing year. These gentlemen were to be prepared to make a report at the annual meeting in March. The chairmen of committees were to prepare reports to be read at the same meeting.

At the close of the meeting Paul Scholz exhibited several copper and flint implements. There were fifty members and visitors present at this meeting.

March 19, 1934. Annual Meeting. President McKern made a brief statement of the aims and purposes of the Society, inviting interested persons to attend its monthly meetings and to become members. Secretary Brown announced the appointment by the President of Mr. Paul Joers to succeed Mr. Geo. A. West as a member of the nominating committee. Members were reminded of the Joint meeting to be held with the Wisconsin Academy of Sciences and Museums Conference at Appleton, at Lawrence College, on April 6 and 7. Twenty members of the Society had already offered papers for the program. At the Executive Board meeting, Messrs. E. C. Steene and Arthur O. Johnson were elected members of the Society.

Mr. Wilton E. Erdman presented a paper outlining the methods pursued by himself in conducting a surface examination of an Indian camp or village site. This contained much information of value to amateur investigators.

This he followed with an equally interesting paper on "The Archeology of the Horicon Marsh", a locality in which he and other members of the Society had been interested for years. He discussed the succession of Indian tribes in the region (Sioux, Sauk and Fox, Mascoutin, Winnebago and Menomini) and described some of the sites from which he had collected information and specimens. At its conclusion this paper was discussed by the Messrs. Dr. Bartle, Dr. Kuhm, Dr. Notz and other members.

The report of Treasurer Thorne was received but not read. The president appointed a committee to audit this report, consisting of the Messrs. Notz, Kieckhefer and Steene. Mr. Thorne presented the report of the committee appointed to nominate officers for the ensuing year. This report was approved and the new officers regularly elected. These were the following:

President—Dr. Alfred L. Kastner.

Vice-Presidents—Dr. H. W. Kuhm, Dr. L. S. Buttles, T. M. N. Lewis, T. L. Miller, R. J. Kieckhefer.

Secretary—Charles E. Brown.

Treasurer—G. M. Thorne.

Directors—Chas. E. Brown, Dr. L. S. Buttles, Dr. A. L. Kastner, Dr. H. W. Kuhm, R. J. Kieckhefer, T. M. N. Lewis, W. C. McKern, T. L. Miller, G. M. Thorne, Geo. A. West.

Advisory Council—W. K. Andrews, Dr. S. A. Barrett, Rudolph Boettger, Dr. E. G. Bruder, H. W. Cornell, Col. Marshall Cousins, Rev. F. S. Dayton, W. E. Erdman, Kermit Freckman, Arthur Gerth, John G. Gregory, Richard Hallstrom, Otto L. Halvorson, Paul Joers, A. P. Kannenberg, Dr. Louise P. Kellogg, Mrs. Theo. Koerner, Marie G. Kohler, Dr. Ralph Linton, A. T. Newman, Dr. E. J. W. Notz, Louis P. Pierron, E. F. Richter, Jos. Ringeisen, Jr., Chas. G. Schoewe, Paul Scholz, Rev. O. W. Smith, Dr. Orrin Thompson, Arthur Wenz, G. R. Zilisch.

Mr. Erdman made an extensive exhibit of Indian pottery and implements which the members and visitors examined after the meeting.

Publications

The January number of *The Masterkey*, published bi-monthly by the Southwest Museum, Highland Park, Los Angeles, California, contains a number of interesting articles. Of outstanding interest are: A new Deal in Archeology, and A Camel-Hunter's Camp in Nevada (regarding ancient man in America), both by M. R. Harrington.

Charles Amsden is the author of a new book on *Navaho Weaving*, a thoroughly documented and critical study of the technical and historical aspects of the title subject, illustrated in color. Published by the Southwest Museum, Highland Park, Los Angeles, California. Price \$7.50.

Of interest and value to the student of pottery, whether primitive or classical, is a recent contribution from the Museum of Anthropology, University of Michigan, Ann Arbor, Michigan: *Standards of Pottery Description*, by Benjamin March, Occasional Contributions No. 3, 1934. Price \$0.75.

David I. Bushnell, Jr., is the author of a recent article on *Tribal Migrations East of the Mississippi*, relating to the distribution of cultural groups of Indians as first encountered by Europeans. Smithsonian Miscellaneous Collections, Vol. 89, No. 12, 1934.

The January-March number of the *American Anthropologist*, N. S., Vol. 36, No. 1, contains among others the following articles: Native American Population, by A. L. Kroeber; Culture Changes in Yucatan, by Robert Redfield; Pueblo Sites in Southwestern Utah, by J. E. Spencer; North American Indian Traditions Suggesting a Knowledge of the Mammoth, by W. D. Strong; A Possible Culture Sequence at Mitla, Oaxaca, by Ralph L. Beals; The Bow-Drill in North America, by Paul S. Martin. Address, Dr. Leslie Spier, Editor, American Anthropologist, Yale University, New Haven, Conn.

Leslie Spier is the author of a recent book on *Yuman Tribes of the Gila River*, based upon two years of research among these people. 434 pages, 15 illustrations. University of Chicago Press. Price \$4.15 postpaid.

A recent booklet by Charles L. Emerson, *Wisconsin Scenic and Historic Trails*, supplies information on points of interest along the tourist highways of the state. The Straus Printing Co., Madison, or at all booksellers and newsdealers. Price \$0.50.

Miscellaneous

Mr. John J. Knudsen, well-known Madison collector, has devised one of the best methods we have seen for the mounting of the flint arrow and spearpoints, perforators and scrapers, potsherds and smaller bone and copper implements included in a private collection. The specimens are neatly fastened to small rectangular pieces of card-board. Each card contains pieces from a particular site. Numbers appear below each specimen. Each card is enclosed in a stout manila envelope which bears on its front pen-and-ink outlines of the specimens

contained on the card. These are numbered to correspond with the numbers on the cards and also carry the data for each. Mr. Knudsen, assistant state architect, is an artist as well as active archeologist. His collection of the above specimens can, by his method, be neatly and compactly filed in drawers. There is no chance of a loss of specimens, or of their being mixed with others. The artifacts of a particular site can always be readily found and there is no danger of their being injured by careless handling. If required for close study they can be readily detached from the card upon which they are mounted. Mr. Knudsen's collection is one of which any Wisconsin archeologist might well feel proud.

Judge Spangler of Menasha has just added to his collection a number of rather unusual specimens which are worthy of mention. One of these is a huge stone axe weighing seven pounds. This great axe has a rounded poll, a broad encircling groove, and a broad blade tapering to a straight cutting edge. Its length is $11\frac{1}{2}$ inches and its width (below the groove) $5\frac{1}{2}$ inches. It is a very well made axe, pecked and ground but not polished. A stone celt is of an elongated oval form, about $8\frac{3}{4}$ inches long, and its weight is $5\frac{1}{4}$ pounds, a very heavy celt. A red sandstone discoidal is about 4 inches in diameter and about $1\frac{3}{4}$ inches thick at its edge. It weighs $1\frac{1}{2}$ pounds. All of these recently acquired specimens are from the Lake Kegonsa region in Dane County.

Mr. Walter Holsten of Lake Mills has added to his choice collection some fine specimens obtained from Mr. Ringeisen, Milwaukee.

With the beginning of another year of archeological investigation in Wisconsin, the Society wishes to remind its members that, as there are no state or other funds available this year for the conducting of archeological field work, it is depending more than ever before upon its individual members to engage in surface survey and other work in their home neighborhoods and elsewhere. At the end of the year all members engaging in such work, whether their undertakings be small or extensive, are requested to file with the Secretary reports of their work and copies of their field notes and accompanying maps and photographs. President McKern, at a recent regular meeting of the Society, particularly called the attention of the members to the need and desirability of doing this. The Society is a state department and is state incorporated. Since 1911 the state has contributed to the publication, research and other funds of the Society. Its survey and other records are state property, preserved by it for the use of archeological investigators, and the general public. If the Society expects future support from the state, its members should contribute to its records and do so regularly. Members may file copies of their reports and records with their home institutions, but it is highly desirable that the Society of which they are members should receive copies also. It is most desirable that every member should thus co-operate.

The Society's records are available to all of its members. The failure of members of the Society to co-operate fully handicaps the chairman and members of the State Survey committee, who are thus unable to present exhaustive annual or other reports; it also hampers the president, secretary and other officers who are interested in the Wisconsin Archeological Society's welfare and progress and its perpetuation as a state department. Every member of the Society should be proud and pleased to know that he has and is taking an active part in enriching the state records. They are a precious heritage which we are bequeathing to future generations of Wisconsin archeologists. Past archeologists have done the same for us.

It is desirable that all members of the Wisconsin Archeological Society should assist in enlisting other members and patrons. New application blanks have been printed and will be distributed with this

issue of *The Wisconsin Archeologist*. If every member will bring in at least one new annual, sustaining or life member, the Society's membership will soon be doubled. In the past ten or more years the membership roll has been rapidly depleted through deaths, resignations and other causes. Present members must assist in again building up the membership to what it once was—500 or more active members. In every town in the state are men and women who can and should be interested in the work which we are endeavoring to do for our state. An increase in membership means bigger and better publications. It will tend to a greatly increased activity in every department of its work.

On Sunday afternoon of March 25, a considerable group of members of the recently organized Wisconsin Outers' Association made a pilgrimage to Aztalan Mound Park and the site of the Aztalan prehistoric enclosure. The ladies and gentlemen in this party greatly enjoyed this their first visit to this famous site. All collected a few arrowpoints and other flint and stone implements from the site, also potsherds and human and animal bones. There was some criticism of the condition of the mounds in the park. The tops of nearly all (the mounds having been excavated and the former filling having settled somewhat) need additional filling. Some tree and shrubbery planting should also be undertaken, and the enclosing fence is in need of repair.

Steps should now soon be undertaken by the Society to acquire the lands upon which are still to be seen the earthworks of the enclosure and to restore at least a part of these.

The Wisconsin Archeologist

Vol. 13

July, 1934
NEW SERIES

No. 4



**PUBLISHED QUARTERLY BY THE
WISCONSIN ARCHEOLOGICAL SOCIETY
MILWAUKEE**

Accepted for mailing at special rate of postage provided for in Sec. 1103
Act, Oct. 3, 1917. Authorized Jan. 28, 1921.

WISCONSIN ARCHEOLOGICAL SOCIETY

The Society is a state department, receiving a part of its support from the state. Its funds are under state control. Its work is well and widely known. It has received the approval of leading American archeologists, who agree that it deserves the full support of all Wisconsin citizens interested in the state's archeological history.

The Society's activities comprise the location, recording, investigating and preservation of Wisconsin Indian remains, folklore and history, all of which are rapidly disappearing and must be recorded and saved immediately if ever.

Through its efforts many fine groups of Indian earthworks and other aboriginal monuments and remains have been permanently preserved to the public. Most have been marked with descriptive metal tablets. Others are being protected. Surveys and explorations have been conducted in many sections of the state.

It is also engaged in encouraging the establishment of public museums and collections and in discouraging the manufacture and sale of fraudulent antiquities.

Regular monthly meetings of the Society are held during the months September to May, inclusive, in the Trustees' Room of the Milwaukee Public Museum. Meetings are open to the public. No regular meetings are held during the months June to August, inclusive. Special field meetings are occasionally held during the vacation months.

The results of its research and other activities are made known through its regular quarterly publication, *The Wisconsin Archeologist*. Thirty volumes have appeared. The Society has a large membership distributed through every part of the state.

It is co-operating to the fullest extent with all of the various scientific and educational organizations and institutions of Wisconsin.

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Wisconsin Archeological Society

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Incorporated March 23, 1903, for the purpose of advancing the study
and preservation of Wisconsin antiquities

OFFICERS

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VICE-PRESIDENTS

Dr. H. W. Kuhm
Dr. L. S. Buttles

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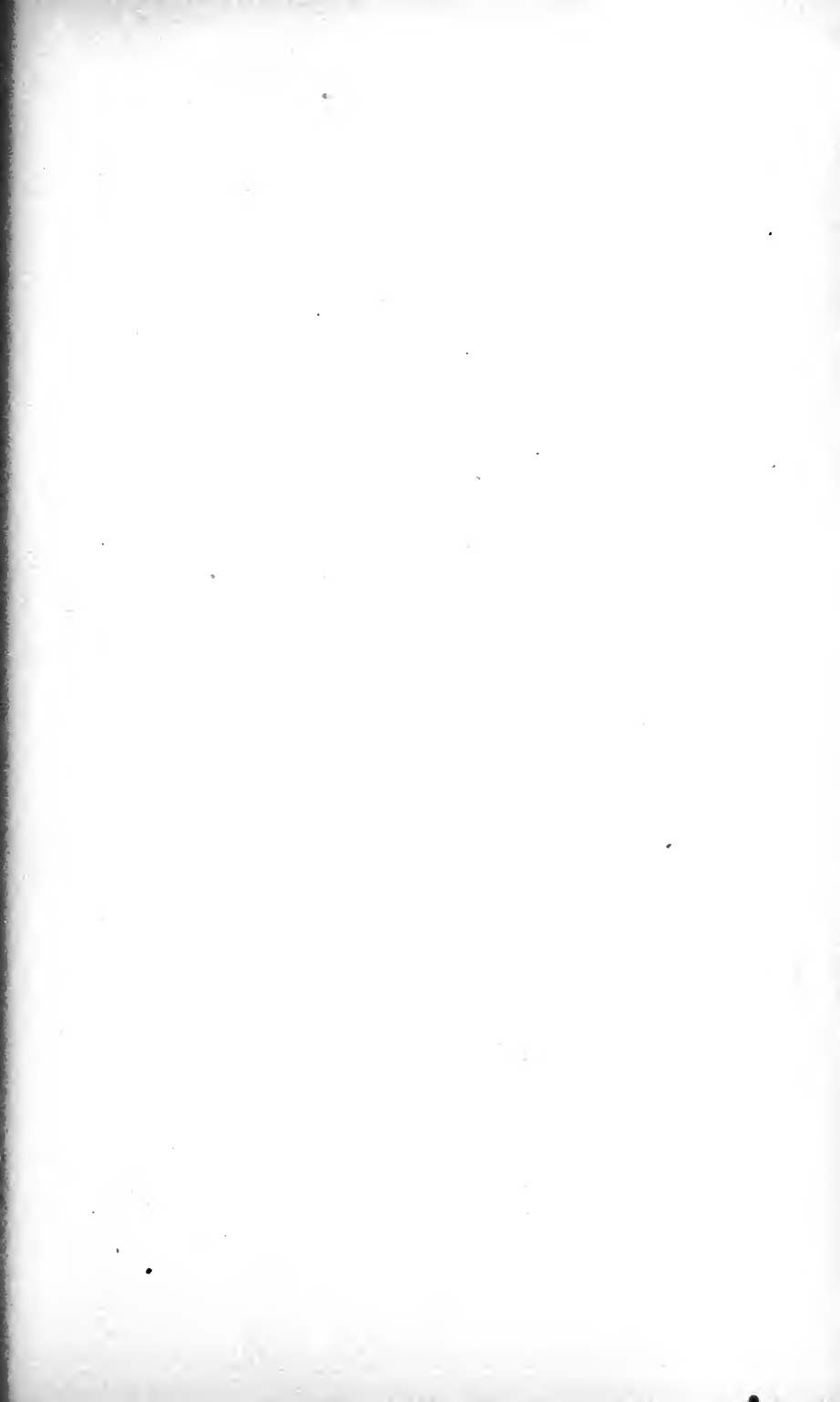
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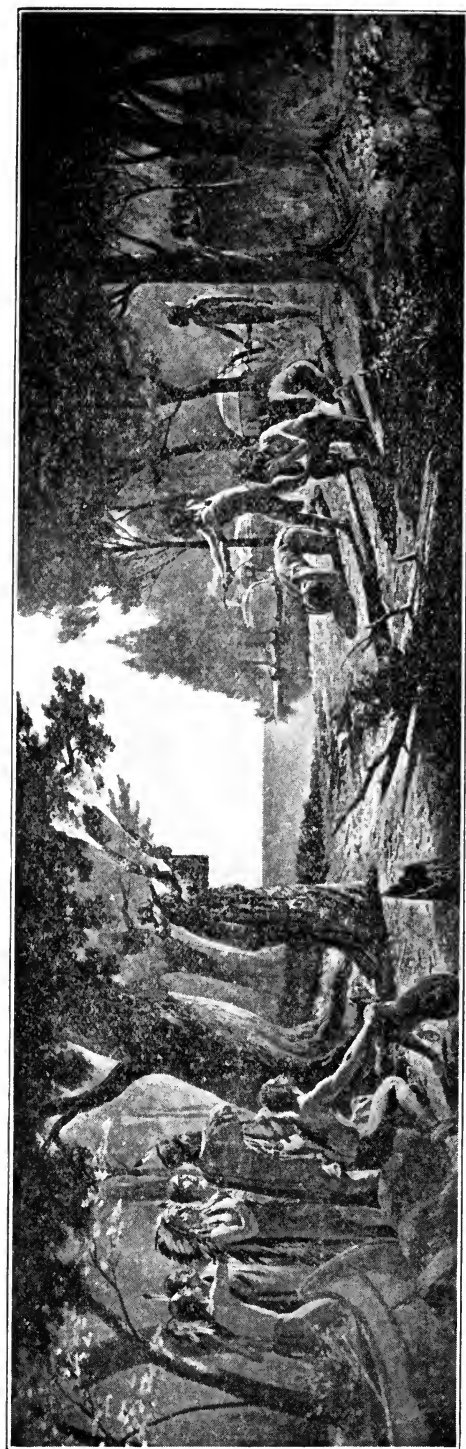
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THE LANDFALL OF JEAN NICOLET, from painting by George Peter (Milwaukee Public Museum Print)

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THE WISCONSIN TERCENTENARY

Lorraine C. Brown

Commemorating the dramatic landfall of the intrepid French explorer, Jean Nicolet, at Red Banks on the Green Bay shore in the year 1634, the people of Wisconsin will this year celebrate the three hundredth anniversary of this great event in the history of our state. We may well honor Nicolet, the first white man to set foot on the soil of what is now Wisconsin, for by his courage and skill as a voyageur he first made known to the world Lake Michigan and Green Bay, proved that the Great Lakes were the sources of the St. Lawrence, and opened a way into the heart of the continent, peopled with many hitherto unknown Indian tribes. To Jean Nicolet and to Samuel de Champlain, who carried out and conceived this daring voyage of discovery, is due all honor for the discovery of Wisconsin.

Early historians knew nothing of Jean Nicolet, and it was not until 1852 that the tale of his voyage was discovered and even then wrongly dated as occurring in 1639. However, in 1876 a Canadian historian proved by documentary evidence that Nicolet's voyage took place in 1634 at the command of Samuel de Champlain, then governor of New France. Repeated stories of vast bodies of fresh water (the Great Lakes) had reached the French governor through the medium of the redmen who came to his headquarters in the interests of the fur trade, and it aroused in him a desire to learn more about these little known waters and also to discover, if possible, whether or not a river could be found flowing from them in a westerly direction which would afford an easy way to the Orient.

With the help of his Huron guides, Champlain had, in 1615, discovered Lake Huron, and after this had busily questioned his Indian friends about the lakes beyond and the tribes that inhabited their shores. He himself wished to visit these distant people, but he was called to France. While there he met a young Norman named Jean Nicolet, and persuaded him to return to Canada with him in 1618. Nicolet's first post in New France under Champlain was among the Algonquian along the Ottawa River, and while among these redmen he learned of the Winnebago, or "People of the Salt Water", and he accordingly hoped that these strange tribesmen lived on the border of the western or China sea.

It then followed that Champlain, now himself too old to undertake the rigors of a wilderness voyage, asked Nicolet if he would undertake the task of exploring the western country of the Winnebago and the Great Lakes. Nicolet readily accepted, and early in July, 1634, with a band of Hurons, started out, equipped with, among other things, "a grand robe of China damask, all strewn with flowers and birds of many colors", with which to make a proper impression on "the People of the Sea" in event that they turned out to be Orientals.

First, after reaching Lake Huron, he headed north to the great strait which is now Sault Ste. Marie. Here he found a village of Chippewa. After a short stay, he followed the advices of his Hurons, who told him that his route lay to the west and not to the north, and shortly he and his guides paddled their canoes past the island of Mackinac and entered Lake Michigan, Nicolet thereby becoming the first white man to view and travel upon this great fresh water lake. He then moved with great caution along the northern shore of the lake, until he reached a deep bay opening toward the southwest where his guides told him there dwelt the people he sought. He was still two days journey from his goal, and dispatched a Huron messenger to precede him with gifts to show his friendliness. After traveling along the waters of what we now know as Green Bay, he came to the Winnebago stockaded village at Red Banks, and there made his dramatic landfall on the soil of our state, fittingly attired in his gorgeous robe, discharging his pistols as he advanced up the beach to greet the assembled tribesmen.

He was disappointed on discovering that his new friends were Indians, and that his opportunity for finding a route to the China sea was lost, but remembering Champlain's orders to make peace for France with all the far tribes, soon established cordial relations, and after a ceremonial feast wherein six score beavers were consumed, he cemented a firm alliance between the natives of Wisconsin and the French of Canada. After this great voyage of discovery Nicolet returned to New France, where he continued in his work as interpreter and agent for New France, until his tragic death by drowning in 1642.

The Wisconsin Tercentenary will bring to the people of our state a realization of the bravery and dauntless spirit of Jean Nicolet, as well as the knowledge that a white discoverer landed on Wisconsin's soil just fourteen years after the landfall at Plymouth Rock.

THE RESTORATION OF AN EFFIGY MOUND

Ruth J. Shuttleworth

At Burrows Park, one of the Madison city parks, on the east shore of Lake Mendota, the restoration of an Indian effigy mound is in progress. This work is proceeding under the direction of Warren Holcombe, caretaker of the park, and the general supervision of the Wisconsin Archeological Society. It consists of filling in depressions on the top and sides of the mound caused by the mutilations made years ago by amateur excavators, the removal of tree stumps and the wear and tear caused by children and adults frequenting this popular city recreation ground. These hollows are being filled in and the entire surface of the mound re-sodded and grass-seeded. This effigy mound was surveyed by Dr. Arlow B. Stout, now a member of the staff of the New York Botanical Garden, on October 27, 1907, when a student at the University of Wisconsin. It was located on property then belonging to the George B. Burrows Estate, a part of which afterwards became city property dedicated to park use and was named for its former owner.

This bird effigy is one of the common Wisconsin type with straight-outstretched tapering wings. These wings are each about 128 feet in length and 14 and 15½ feet in width where they unite with the body. The length of the body is 62 feet, its width at the neck being 16 feet, at its middle 18 feet and near the end of the expanded tail 20 feet. The height of the body is about 3 feet. The head of the mound is directed to the west, toward the shore of Lake Mendota several hundred feet away. A tablet mounted on a boulder, presented by the Madison Gyro Club, marks this effigy mound.

A short distance north of this bird effigy there formerly was an effigy of a quadruped, probably intended to represent a fox or wolf. This was situated in front of the former Burrows' residence. It was removed when the improvement of this part of the estate was undertaken. It was about 200 feet in length. No other effigy just like it has been located in Wisconsin and its destruction was therefore the

more regretted by local archeologists and interested friends. This mound was originally described by Dr. Stephen D. Peet, the once well-known American antiquarian, in his book, "Prehistoric America—Emblematic Mounds", published in 1893. Dr. Arlow B. Stout made a plat of it when making his survey of the bird effigy.

Attention is called to the repair of the bird effigy at this time because there are preserved in city and state parks and on private properties in this state quite a number of conical and emblematic mounds, the public interest in which would be increased if they were restored to their original condition. Such work should be carefully executed and under proper supervision.

THE DREAM DANCE DRUM

Gene Sturtevant

A few years ago I was privileged to attend a rather unique ceremony on the Menominee Indian Reservation; it was incident to the transferring of the ownership of the drum of the Dream Dance Lodge to the Oshkosh Public Museum. While adequate compensation was made for the drum, it was not a mere buy and sell transaction. Gifts were tactfully tendered and the presentation of the drum impressively made.

Perhaps not all those present saw it as I did; perhaps they saw only a few poorly dressed Indians, with somewhat tawdry decorations. That is not what impressed me. What I felt I have endeavored to portray in this little sketch, which without much thought arranged itself into three parts: the Meeting, the Drum, the Ceremony. With just a word regarding the Dream Dance Lodge;—for the latter I am indebted to my friend, Arthur P. Kannenberg. The principal meetings of this society were held in the spring and the fall; at the time of the budding leaf and again when the leaves were falling. When the Lodge was in its hey-day four drums were used, always being beaten by sachems or medicine men. It was the custom to present these drums to other favored tribes; and it is said that two of them were given to the Pawnee Indians. The entrance to the Lodge was always at the east and the exit at the west. When members were lost by death, their clothing and belongings were made into bundles, and at the next meeting of the Lodge, these bundles were placed in the circle where the deceased formerly sat, and were addressed as though the person were there in the flesh, instead of in the spirit. The Lodge is what its name implies, mystical, "Waubeno", the Society of Dreamers.

The Meeting

On May 3, 1931, an interesting event occurred at the home of Robert Pa-mop-o-my, near the village of Keshena on the Indian Reservation, participated in by the surviving

members of the Dream Dance Lodge of the Menominees and representatives of the Oshkosh Public Museum, the occasion being the formal farewell ceremony preceding the placing of the drum of the Lodge in the Oshkosh Public Museum. Through the efforts and arrangements made by Arthur P. Kannenberg, John Valentine Satterlee, called "Uncle John" by his red and white friends alike, was in charge of the ceremony, and Robert Pa-mop-o-my, custodian of the drum, Mose Ny-ach-la-o-my and Na-chee-wi-stok Waupeka, alias Charlie Dutchman, Medicine Man, took part in the proceedings.

Soon after the guests arrived, a wild rice luncheon was eaten, supplemented by the contents of picnic baskets. Later the tables were removed and the drum given the place of honor on the lawn. Grouped around the drum were the interested guests.

In the stacatto Menominee tongue, Charlie Dutchman, to give him his popular name, told of the drum and something of the history of the Dream Dance Lodge, as the tradition had been taught him; his interpreter being the venerable sachem, John Valentine Satterlee, who for years past has been an official Government interpreter, and who repeated in English the tale as it was told in the presentation speech made by Charlie Dutchman. Arthur P. Kannenberg, President of the Museum Board of the City of Oshkosh, tendered gifts and accepted the trust in behalf of the Museum, which was also represented by Miss Gene Sturtevant, Vice-President of the Board, and by Mr. Carlton Foster, an Honorary Curator of Archeology.

As a spontaneous mark of appreciation of the interest Mr. Foster has manifested in his friends among the Menominees, an Indian name was bestowed upon him; the Neopit family requesting that he bear the name "Neopit". This incident was completed by the presentation to Mr. Foster of the regalia of exquisitely wrought beadwork, by its wearer, Charlie Dutchman, who, with impressive words and gestures, made his gift, using the Menominee language, the interpretation being "To show the spirit of friendliness and love he feels for the people of Oshkosh and his friend, Mr. Foster, and because the 'sash' worn by the attendant of the

drum should belong to one whose interest is keen and who in the future would be close to the drum."

It was a pleasurable ceremony and a notable one, cementing anew the fraternal sentiment and stimulating the interest of those who have the welfare of Indians at heart.

The Drum

The drum itself is impressive as a symbol of its spiritual significance. A yard, at least, across, its sides circled by bands of intricately woven beads, the patterns telling a story to those who understand. Its base is ornamented with notched and highly polished deer hoofs; and hanging from bits of ribbons and sinews swing coins of the realm, silver halves, quarters and dimes, the dates going back fifty years and more.

In the brave old days, to stretch the vellum head tightly to make it resonant, a carefully tended fire was lighted underneath the drum, the gentle heat contracting the skin until just the right tension was acquired to perfect its tone. The drumstick, or beater, with its hand hold wrapped in sinews, its top swathed in fur, is a fitting implement.

The exact origin of this drum is shrouded in the past. No living man knows its maker's name or tribe. The colors spread upon its head, equally divided across its circle, are crimson for the dawn and sunrise, and shadowy blue, almost black, for the setting sun and evening. The four points of the compass are there, the North, the South, the East and the West; and the position of the drum was carefully determined with these things in mind.

Placed on a white cloth in front of the drum were the articles used in ceremonials. The wands, beautifully wound with beaded bands and tasselled with mink tails; the eagle feathers tied with red; the calumet, its carven bowl of stone, its stem three feet long, skillfully decorated. The little trays placed for the offerings of tobacco and the gifts. A pagan altar out of the past!

The Ceremony

Whang! Explosive, and resonant boomed the Drum. Startling even the listeners who had anticipated the sound.

How! Rang the voice of the old Medicine Man,—and closing ones eyes to the actual scene, back over the years speeded the mental vision, as the story was told in Menominee; and the forest seemed peopled with a multitude of braves and gaily bedecked squaws, as the men and women of the Red Nations gathered at the bequest of the woman “Omaha”, to whom the Great Spirit had vouchsafed the gift of vision and of prophesy. This woman was the prophet of the Red Race, who dreamed of unity and visioned friendship among her people.

The voice of the Medicine Man rose and fell, interrupted only by the interpreter, who fluently and poetically turned his words to English.

Many had been the feuds and intertribal strifes among the Sioux, the Ojibwas, the Pottawatomies and the tribes of the plains, and to them the message of the vision of Omaha was proclaimed.

“My people, cease your quarrels or the Redmen perish from the earth. The Great Spirit came to me in a dream,—we can live and prosper only in love and friendship with one another. Take this message with the drum to all our people. Omaha has told you!”

So from the plains of the west, the land of Omaha, first travelled the drum, revered and honored by those in whose care it lay. Around and across the plains, who can tell the trails over which its resounding voice carried the peaceful message of Omaha? Until at last, more than a half century ago, it came with its message of peace and good-will, from the lake country of Michigan, to remain with the Dream Dance Lodge of the Menominees.

And there under the pines, near the sparkling waters of the Wolf, year after year, season after season, the sound of its mighty voice led the followers of the Dream Dance Lodge. In 1881, the roster of the Lodge was long; the names of men brave and wise appear thereon, Neopit, Oshkosh, Pamapomy, Neekanesh, Moses Corn, Wauposhekee. Okemaw, Antoine Fish, and many, many others, nearly all of whom have passed to the Happy Hunting Grounds of the Great Spirit. And on that day, under the pines, near the

sparkling waters of the Wolf, the little group of white haired men and women came, and with them were three, three only, the last surviving members of the Dream Dance Lodge. Bent with years and faces furrowed with life's hardships, were these Menominees, who came to relinquish and bid good-bye to the cherished old Drum. Its colors unfaded, its ornaments untarnished, the intricate beaded designs with which it is entwined casting brightly back the sunshine of a perfect day of spring. The dancing shadows of the pines failed to dim the crimson stain across its head. And there, under the pines, near the sparkling waters of the Wolf, in response to the swing of the stick in the hand of the Old Medicine Man, the Drum sounded its last good-bye.

The gifts were tendered and accepted, the faithful trust of years relinquished, a new trust taken, and again the Dream Dance Drum travelled to rest enshrined with relics of past days, to mutely tell of the vanished glory of the first Americans.

Page 41, Skinner's Indian Notes and Monographs, gives practically this origin of the Society of Dreamers, stating that the cult was probably introduced among the Menominees by the Pottawatomi of the Prairies.

STONE ADZES

Charles E. Brown

In 1903, Henry A. Crosby, then president of the Wisconsin Archeological Society, published in *The Wisconsin Archeologist* an article descriptive of the stone adzes then in Wisconsin collections.

The specimens which he described were in the Milwaukee collections of William H. Ellsworth, William H. Elkey and the Milwaukee Public Museum, and in the Frank M. Benedict collection at Waupaca. All of these once well-known collectors died years ago and their collections passed into other hands. The Elkey collection is in the Logan Museum at Beloit College, Beloit, and parts of the Ellsworth and Benedict collections are in the Milwaukee Public Museum.

The adzes which Mr. Crosby described were obtained from Indian sites at Elkhart Lake, and Sherman, in Sheboygan County; at Kilbourn (now Wisconsin Dells), in Columbia County; Viroqua, Vernon County; Black Creek, Outagamie County, and from unidentified localities in Wood and Racine Counties. Another specimen was reported by Paul A. Seifert as having been collected at the village site at Richland City, Richland County, a once rich site now largely carried away by the waters of the Wisconsin River. The remnant of this once interesting river town now forms a part of Gotham. Brief descriptions of eight adzes were given, their dimensions and weights being noted. The smallest adze was seven inches and the largest eighteen inches in length. Most of the specimens were between nine and fourteen inches long. In weight they ranged from one to five pounds.

The adzes are described as having "a general elongated elliptical shape, one extremity narrowing to and terminating in a pronounced blunted point and the other in a somewhat broadly rounded cutting edge. The most noticeable feature of these implements is the generally well curved central ridge which traverses the top or back from the narrow,

pointed extremity to within several inches of the cutting edge. From the termination of the ridge the surface slopes, or bevels, off quite broadly to the cutting edge of the implement. The pecked (or smoothed) surfaces on either side of the ridge are slightly rounded or slope away quite sharply to the edges of the base on either side, thus giving the more or less pronounced triangular section from which the implement gets its name." The author does not mention that the bases of these implements are shallowly concave from the cutting edge for a distance of one or several inches.

In speaking of the possible use or uses of these generally large stone implements by the Indians the author says: "The stone adze was essentially a wood-working implement and probably played an important part in the hewing out of dugouts (log canoes) and for similar purposes." This statement there is no present reason for criticizing. Doubtless timbers were also trimmed with them when required.

In the thirty-one years which have passed since Mr. Crosby wrote his original description of this interesting class of aboriginal stone implements about twenty-five additional specimens have been found and brought to the writer's attention. Of these the greater number were made by flaking, pecking and grinding from the hard basalt rock. Descriptions and notes of a few of these may be given and some others mentioned.

The largest of these measures seventeen inches in length. Its height at its middle is two inches and its base at this point is two inches in width. Its sides are smoothed for two-thirds of its length and roughly flaked for the balance of the distance to its pointed end. Its base is slightly excavated for a distance of three inches from its cutting edge. This large and fine specimen is made of basalt. It is reported to have been found in the Rock River region near Jefferson. It is in the collections of the State Historical Museum, at Madison.

An adze found on the bank of the Chippewa River, one mile north of Holcombe, is twelve and one-half inches in length. This specimen was in the collection of Dr. W. H. Bailey, a former resident of Chippewa Falls. Two adzes

were found together on an Indian site on the bank of Duck Creek, near Portage. Both are in the State Historical Museum. They are each about twelve inches long. Two other specimens of smaller size have been found in the same locality. A quite remarkable discovery was the finding in recent years of four of these stone adzes in a hog-yard at Prairie du Chien. Four adzes have been collected from Indian sites about the Four Lakes, at Madison. In the Joseph Ringeisen, Jr., collection at Milwaukee there are three specimens. One, measuring about eleven inches in length, was found in Vernon Township, Waukesha County, and another, about twelve and three-eighths inches long, at Richland City. A third specimen, eight and one-half inches in length, came from Omro, Winnebago County. A ten inch adze was found near Chetek, Barron County. Other specimens were obtained at Muskego Lake, Waukesha County; at Oxford, Marquette County, and on the banks of the Wisconsin River south of Portage.

A study of the distribution of these implements in Wisconsin, such as present records make it now possible to make, shows that the greater number of these have been found on Indian sites along the banks of the Wisconsin River from Wisconsin Dells southward to Prairie du Chien. In northeastern Wisconsin specimens have been obtained near Sturgeon Bay, in Door County, and in Brown County. A few adzes have been collected along the course of the Rock River from Jefferson southward. The finding of stone adzes about the Madison lakes has been mentioned. In eastern Wisconsin adzes have been found in the counties of Sheboygan, Washington and Waukesha. The specimens found farthest north in the state are those mentioned as collected in Chippewa and Barron Counties. None have as yet been reported from the Mississippi River region.

THE DESTRUCTION OF MOUNDS IN CERTAIN SOUTHERN STATES

Lewis S. Buttles

When the first settlers arrived in the region bordering the lower half of the Mississippi River and its tributaries, their attention was attracted by many huge piles of earth in an apparently level country. These early settlers learned after a few years of experience that they were living in a country in which the characteristics were a great deal different than the land from which they had come. The Mississippi River and its tributaries at the lower part of the river had an overflow each year which was greater than any river in any part of the continent. The nature of the river which may have been one of the reasons for the erection of these huge mounds, may also be the reason for many of them being destroyed.

The early settlers soon took advantage of these large mounds, for they had learned that if the river overflowed, and the water had risen from ten to twenty feet, that a thirty or forty foot mound was the only piece of land which might protrude above the water for miles around. The early settlers in the beginning used these mounds in three different ways. First they built their houses on them, if they had a truncated mound it was ideal, they just dug the basement, and built their house. If they had a large conical mound, they first had to cut the top off of it until they had a circumference which was large enough to build their house on. In either case the mound was totally destroyed, and of no further archeological interest. The same may be said of barns and other cattle pens, because the early settler thought just as much of keeping his cattle out of the high water as he did himself. This particular type of destruction has been going on from the very beginning of settlement to the present day. You may drive through Arkansas, Louisiana, and Mississippi and find a spot where there was a group of four or five mounds, and note that there stands on top of one or more of these mounds a large fine modern plantation house with its buildings.

Another purpose which these early inhabitants, both black and white, used the mounds for was a depository for their dead. Man in all ages and all parts of the world has always had special places in which to bury his dead, such as pyramids, crypts, mausoleums, etc., the idea being to preserve the body in death as in life. In this water-soaked country of floods, the mounds proved an ideal spot for burial. In some locations an entire town might use a mound as a cemetery. In this case the bones and artifacts of the Indian were thrown out and those of the white man put in, all of which would destroy the mound for future archeological investigation.

The Civil War also destroyed a large number of mounds. Two particular cases are at Memphis and Vicksburg. In De Soto Park, in Memphis, are three or four large mounds, both truncated, and conical. Some were cut down by the Union Army under General Grant, and used as ramparts on which to mount cannon. Another mound was hollowed out and used as a place in which to store ammunition. These mounds have been preserved in this condition. Some other mounds were also destroyed by General Grant at the Battle of Vicksburg. They were also used as mountings for cannon.

Archeological sites and mounds in the south have been destroyed from the very beginning by the plow. In burial ridges and in the cemeteries around the base of mounds all of the burials have been destroyed, except those which lie deeper than two feet. Many of the mounds have been entirely plowed over the top, thus each year lowering the mound, and in time entirely destroying it. In many mounds in which only one attempt was made to plow the top all evidence of later burials have been removed. There is no doubt that if in the future tractors are used instead of mules that many more of the larger mounds will be destroyed.

Many mounds have also been destroyed by the river itself. The Mississippi River has a way of changing its course so that within a limit of ten or twenty miles it may be here today and somewhere else in a few years. This changing of the river course has been going on for some five

hundred to a thousand years, or whenever these mounds were built on the Mississippi River itself. The mounds that we find today are located on old rivers, or bayous.

In later years a number of mounds have been destroyed by modern construction machinery. The Federal Government in building levees along the Mississippi River has destroyed mounds in two ways. When a mound is on the line, or near the line, where a levee is to be constructed, they nearly always use the ground in the mound in the construction of the levee. In many cases a levee may have been built years ago, and a nearby mound not touched. In recent years it has been necessary to enlarge these levees, and with modern grading machinery, with huge derricks, it is just a matter of a short time and a mound is entirely obliterated. Another way in which these mounds have been destroyed is when the levee has been built on the outside of the mound. That is, the mound has been left between the river and the levee. In this case when the river rises the mound is washed away if the current is swift, or the mound is buried by a deposit of river mud if the water is just overflowing. An example of this is Pecan Point, Arkansas, which has entirely fallen into the river.

In a country like the south where it is necessary to build many bridges, we find a different form of mound destruction by state governments. That is, whenever a bridge is built across a river a long fill is necessary leading up to that bridge. Many times a bridge is built near a city, the city being built at the confluence of two rivers, usually will be found to be a place of former Indian occupation, with probably some Indian mounds located nearby. In a case of this kind it is usually easier to get the dirt from the mounds and so they are destroyed. An example of the destruction of a famous group of mounds is at Troyville, Louisiana, now called Jonesville. This town is located at the junction of the Quachita, Tensas, and Little River, which form the Black River. Here was formerly a large site of Indian occupation. In this case five large mounds were destroyed to build a fill for a bridge. The author witnessed the result of this destruction in the summer of 1933.

In the south nothing is done to preserve mounds at all, except in the case where a mound is located in a town, then it is usually preserved by that town. Some plantation owners may preserve a mound for cattle to get on in case of high water, other than this nothing is done.

By destroying these mounds the oldest man-made monuments in these states are destroyed and gone forever. The loss is not only in the mounds being destroyed, but a culture of the oldest inhabitants of our own country goes with it. Incidentally, many beautiful earthenware pots for which this region is famous are lost to us. Destroying mounds spells "Trails End" for an interesting and important science.

A POT FROM PANAMA

Albert H. Sanford

Recently the writer received from a resident of Corozal, in the Panama Canal Zone, a small earthen pot that seems to belong to a most interesting group of ancient Indian remains. A very large collection of objects in this group may be found in the National Museum. They are discussed in a paper, "Ancient Art of the Province of Chiriqui, Columbia", by Wm. H. Holmes, in the Sixth Annual Report of the Bureau of Ethnology, 1884-5, pp. LI-LIV, 4-187. (Published in 1888.)

The province of Chiriqui, now a part of the Republic of Panama, is the westernmost province of that country, being bounded on the west by Costa Rica. It is bordered on the east by Veraqua and extends, through part of its area, from ocean to ocean. The articles in the collection mentioned above were obtained almost entirely from graves and were collected by J. A. McNiell, who personally supervised the examination of thousands of graves during a number of years.

It is the judgment of Wm. Holmes that for America the earthenware of this province "represents a very high stage of development". He says, "Its advanced development as compared with other American factile products is shown in the perfection of its technique, in the high specialization of form, and in its conventional use of a wide range of decorative motives. There is no family of American ware that bears evidence of higher skill in the manipulation of clay or that indicates a more subtle appreciation of beauty of form, and no other that presents so many marked analogies to the classic forms of the Mediterranean."

The small pot which is the subject of this sketch would seem to be one of the poorer specimens of work accomplished by the Indians of the Isthmus. Indeed, it is not known that it came originally from Chiriqui. It stands $2\frac{3}{4}$ inches high. The mouth is $1\frac{1}{2}$ inches across and the largest diameter of the bowl is 3 inches. It has three short

legs. These are round and taper downward. There are two crudely shaped lobes attached as handles. These are pierced by small holes. This pot is dark terra cotta in color, with a smooth, but not glazed, surface. The walls are thick and the material is firm.

A pot quite similar to this one is shown as Fig. 124, on p. 89 of Mr. Holmes' paper, but the one there represented is considerably larger. Also, the figure shows a different type of decoration. The pot now under discussion has two crude markings on opposite sides just above the swell of the bowl. Each figure is a rectangle, bordered above and below with triple parallel lines. Within the rectangle are crudely scratched vertical lines, except at the middle of the rectangle, where are two triangles, with points meeting in the center. No one of the many illustrations in the Holmes' paper shows exactly the same figure.

The account accompanying this pot was given by the dealer from whom it was purchased. It states that natives who search for graves pound the ground with a stick until a hollow sound is detected. Also, it is stated, that the graves are lined with stones. These facts correspond quite well with the general outlines of more detailed data given in Mr. Holmes' article. He shows (pp. 17-19) drawings of sections of graves, in each case lined with stones, as described by McNeil. He also states that the method employed in finding graves (since there are no surface indications of their location) was that of piercing the ground with a small iron rod until a hard substance was encountered.

Mr. Holmes states that there is no homogeneity in the pottery found in Chiriqui. On the contrary, he says, there is "strong evidence of mixed conditions of races and arts". These evidences are found in "the marked diversity and individuality of character of the various groups of ware". Evidently, the pot we are describing (if it came from Chiriqui, as might be inferred from its close similarity to Fig. 124) does not belong to the group that gives evidence of the highest skill. Some of the specimens, Holmes says, show Costa Rican influence and others show influence from regions farther south. Where this particular pot fits into the grouping that he makes is not for the present writer to venture any guess.

ARCHEOLOGICAL NOTES

MEETINGS

April 16, 1934—Dr. Alfred L. Kastner, president-elect, presided over the meeting of The Wisconsin Archeological Society held in the trustee room of the Milwaukee Public Museum on the evening of this date.

There were 150 members and visitors in attendance. Secretary Brown announced the election to membership by the Executive Board of Mr. Eli Lilly, of Indianapolis, a life member, and of Mr. Frank M. Neu, of Madison, an annual member. He presented a report on the annual joint meeting held with the Wisconsin Academy of Sciences, Arts and Letters and the Midwest Museums Conference, at Lawrence College, Appleton, on April 6 and 7. At this meeting twenty-two papers on archeological, historical and museums subjects were presented. The attendance of members of the Society was very good.

The President introduced Dr. Louise P. Kellogg, of Madison, who gave an illustrated lecture on "The Wisconsin Tercentenary". The speaker gave a very interesting account of the life of Jean Nicolet, the daring French explorer, who, in the year 1634, came to the shores of Green Bay from Canada to search for a possible route to China. The landfall of Nicolet, the first white man to enter the Old Northwest, it was proposed to this year celebrate with pageants, plays and other appropriate programs in various Wisconsin cities. At the conclusion of her lecture various questions were asked the speaker by members of her large audience.

Miss Bauman exhibited a historical map of Wisconsin, which she had prepared. On the motion of Dr. Kuhm, a recommendation was made to the Postmaster General to adopt this map as a possible design for a commemorative stamp or other uses.

Mr. Alexander C. Guth, of Milwaukee, presented a brief report of the C. W. A. Survey of Wisconsin Historic Buildings, conducted by himself and other architects. Mr. Rudolph Boettger exhibited some flint points and other implements collected by himself at Aztalan. Mr. Paul Scholz showed a fine native copper chisel and a trade glass bead collected by himself.

May 21, 1934—President Kastner conducted this meeting, there being thirty-five members and others present. He introduced to the members Mr. Charles A. Lapham, son of the distinguished Wisconsin pioneer archeologist and educator, and Mr. Charles Lapham's daughter, Mrs. Laura Lapham Lindow, both residents of Milwaukee. Their acknowledgments were received with applause. The election of Mr. A. W. Prendergast, Fairbury, Illinois, as an annual member of the Society was announced.

Mr. Alexander C. Guth, Milwaukee architect, favored the members with an address on the subject of "Early Day Architecture of Wisconsin". The speaker described in interesting detail many of the residences, churches and other buildings located by the C. W. A. survey in Wisconsin. Some of these buildings were located at Mukwonago, Racine, Mineral Point, Prairie du Sac, Darlington, Milwaukee, Prairie du Chien, Kaukauna, Green Bay, Dodgeville and other places in Wisconsin. This address was discussed by Mr. John G. Gregory, Mrs. Lindow and Dr. Eberhard J. W. Notz. The hope was expressed

that the Government and the State would encourage and assist in the permanent preservation of some of these historic structures. Some should become historic house museums.

Mr. Brown suggested a summer pilgrimage of members of the Society to the residence of the veteran Wisconsin archeologist, Mr. Halvor L. Skavlem, at Carcajou Farm, Lake Koshkonong. This suggestion was very well received and it is possible that such an outing will be arranged, a local committee to be appointed by President Kastner making the necessary arrangements. (Mr. Skavlem is now nearly 90 years old.)

Messrs. Schoewe and Erdman made exhibits of archeological specimens whose history and use they explained. President Kastner spoke briefly of the personnel of the Society and of the survey and other helpful work in which members might engage in to its public credit during the months of its summer adjournment.

The Beloit Historical Society held a pilgrimage to Indian mounds, historic springs and buildings in the vicinity of Beloit, on Saturday, June 2. Secretary Charles E. Brown and Halvor L. Skavlem were among the speakers at this very successful and notable outing.

The University of Wisconsin Arboretum and Wild Life Refuge, located on the south shore of Lake Wingra and vicinity, at Madison, will be dedicated with appropriate ceremonies at the Arboretum buildings, on Sunday, June 17, 1934. Two good groups of prehistoric Indian mounds are among the other public attractions of the Arboretum. A third group it is hoped to also preserve by the addition of other acres to this already very extensive wild life preserve. Col. Joseph B. Jackson, of Madison, has been one of the most active and enthusiastic workers for the acquirement of the Arboretum.

At a business meeting of the Midwest Museums Conference held at Lawrence College, Appleton, on April 7, on the last day of the joint meeting elsewhere noted, officers for the ensuing year were chosen. Mr. Charles E. Brown was chosen president of the Conference, Prof. John B. MacHarg, vice-president, Mr. Ralph N. Buckstaff, treasurer, and Mrs. Ruth J. Shuttleworth, secretary. Messrs. W. C. McKern, Alonzo W. Pond and Nile C. Behncke were selected as members of the Board of Directors. A meeting of the Conference may be held at Madison during the autumn.

The annual meeting of the American Anthropological Association, Central Section, was held in Indianapolis, May 11-12. The sessions were well attended by members and visitors from ten states. The president, W. C. McKern, opened the meeting with an address on "Certain Problems of Culture Classification in Middle Western Archeology". The program was unusually rich in archeological subject matter. Of outstanding interest were: "Some Comments on Pottery Terminology", by James B. Griffin; "Nebraska Culture Determinants and Their Relationship to the Mississippi Basic Culture", by Dr. Earl H. Bell; "The Society for American Archeology", by Dr. Carl E. Guthe; "Indian Trade in the Wabash Valley", by Dr. Amos Butler; "Application of the Tree-ring Method to Mississippi Valley Archeology", by Florence Hawley. Dr. Charlotte Gower, of Madison, Wisconsin, gave an interesting talk on "Friendship Among the Sicilians". A paper by our secretary, Charles E. Brown, who was not able to attend, was read by title: "American Archeology and the Amateur Archeologist".

At the business session which closed the meeting, Dr. Warren K. Moorehead was elected president of the Central Section for the ensuing year.

MISCELLANEOUS

Mr. Fred Du Frene, a former member of the Wisconsin Archeological Society, died at his home at Middleton, on June 5. Mr. Du Frene was once an enthusiastic collector of the Madison Lakes region. His collection was years ago placed in the care of the State Historical Museum.

Mr. Ralph A. Engel, of Madison, has added to his collection a large knife of light colored quartzite reported to have been found at Sun Prairie, near the old Milwaukee to Madison trail. It is nine inches in length and appears to be fashioned of a quartzite similar to that quarried by the early Indians at Silver Mound, near Alma Center, in Jackson County.

Mr. Kermit Freckman has been engaged in field work at Pleasant Lake, near Coloma. A report of his previous work in that region has been published by the Society. We trust that many members will engage in similar investigations in other parts of Wisconsin during the summer and report the results of their researches to Secretary Brown. Report blanks will be furnished on request.

Mr. Brown is printing for use during this year's University of Wisconsin summer session a leaflet, "French Pathfinders of Wisconsin—Explorers, Traders and Missionaries". Copies of it may be had after July 1 on payment of the postage, ten cents. The State Historical Society has published a similar leaflet, "The Tercentennial of Wisconsin", prepared by Dr. Louise P. Kellogg. Copies may be purchased of the State Historical Society, Madison. Cost, ten cents.



WISCONSIN ARCHEOLOGICAL SOCIETY PUBLICATIONS

Of the 30 volumes of the Wisconsin Archeologist, 20 volumes were published in the old series and 10 in the new series. Most of the quarterly numbers are in print and may be secured by addressing Charles E. Brown, Secretary, State Historical Museum, Madison, Wisconsin. Price, 60 cents each.

A table of contents of all publications to and including Volume 7, New Series, may be obtained from the secretary. Publications for the last five years, Volumes 8-12, New Series, are briefly listed as follows:

- Vol. 8, No. 1. Effigy platform pipe. Wisconsin skeletal remains. Reedsburg Cache. Indian earthenware vessels. Miscellaneous articles.
2. Earthenware vessels. The stockaded village. Aztalan Mound Park. Miscellaneous articles.
 3. Checklist of Wisconsin Indian implements. Ancient village site in Winnebago County. Miscellaneous articles.
 4. Winnebago County Indian earthenware. Cartographic symbols. Iowa archeological survey. Miscellaneous articles.
- Vol. 9, No. 1. Indian village and camp sites of the lower Rock River.
2. Indian trails. Stone adzes. Petroglyphs and pictographs. Miscellaneous articles.
 3. Barbed stone axes. Copper knives. Fraudulent Indian implements. Miscellaneous articles.
 4. Pottery smoothers. Plant games and toys of Chippewa children. Miscellaneous articles.
- Vol. 10, No. 1. Pine, Beaver and North lakes.
2. Technique in archaeology. Old beach camp sites in Winnebago County. Fire-steels. Miscellaneous articles.
 3. Copper implements. Silver ornaments from Grand Butte. Indians in painting and sculpture. Prehistoric vertebral pathology. Miscellaneous articles.
 4. Bone implements from Sheboygan. Florida burial mound. Keokuk axes. Miscellaneous articles.
- Vol. 11, No. 1. Reprints of early descriptions of effigy mounds.
2. Birdstones. Old Kentucky. Lake Geneva Centennial. Archeological surveys. Method of recording surveys.
 3. Dr. G. E. Collie. Southwest pottery. Indians of Virginia. Explorations in Green Lake County. Copper bird effigies. Present condition at Aztalan. Story of Butte des Morts. Archeological records.
 4. Charles de Langlade. Uses of wood and bark. Distribution of copper. Overton camp site. Utah archeology. Sugar-bush ceremonials.
- Vol. 12, No. 1. Archeological research in Wisconsin. American Indian art.
2. Greater copper pike. Winnebago bags. Survey in Milwaukee County. Museum origins.
 3. Huron Herbert Smith. Excavations at Aztalan. Discoidals. Wisconsin pot. Refuse pits.
 4. Pleasant Lake survey. Odd Indian tools.

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